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REPORT

OF THE

DEPARTMENT OF LANDS AND SURVEY, NEW ZEALAND,

FOR THE

YEAR 1912-13.

BY

JOHN STRAUCHON, I.S.O., UNDER-SECRETARY.

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NEW ZEALAND.

DEPARTMENT OF LANDS AND SURVEY

(ANNUAL REPORT ON).

Presented to both Houses of the General Assembly by Command of His Excellency.

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CROWN LANDS OPENED FOR SELECTION.

The area opened for selection during the year aggregated under all tenures 337,503 acres. The table following shows the areas opened under each system for the several land districts. It will be gathered from the table that 114,124 acres were opened on the optional system, 166,945 on renewable lease, 43,604 as small grazing-runs, and only 9,345 as pastoral runs. The area opened this year shows a falling-off from last year's total, but this is accounted for to a large extent by the withdrawal of pastoral runs totalling 217,743 acres, the disposal of which is being held over pending proposed legislation with a view to improving the tenure. So far as settlement lands are concerned, this falling-off occurred during the first nine months of the year, as for that period the area offered was 107,992 acres, whilst the figures for the last quarter alone were 218,184 acres. This increase in the area opened during the last three months of the year was mainly due to extra assistance having been provided for the necessary survey work, and to the carrying-out of your instructions in July last that lands suitable for settlement should be surveyed and made available as early as possible.

The future demand for land cannot be adequately met from the areas at present belonging to the State. From the tables published it will be observed that there are only some 4,500,000 acres remaining for subdivision and settlement. When, however, it is realized that the first-class land in this 4,500,000 acres is not more than 100,000 acres it will easily be understood that little provision can be made out of this area for the small settler or the settler who desires a small holding.

During past years the better-class lands have been dealt with by the Department, and we have now reached the stage when only the small quantity of good land referred to above remains. Of course, the second- and lower-grade lands will be treated and opened in suitable holdings according to the nature of the country, but it should be understood that the expense of providing access will be greater in proportion than hitherto owing to the rougher character of the lands. Naturally, therefore, future annual reports will give figures showing a diminishing acreage of settlement lands taken from the ordinary Crown lands of the Dominion.

TABLE A.—LAND OPENED DURING THE YEAR ENDED 31ST MARCH, 1913.

District.	Optional System.	Renewable Lease.				Cash by Auction.	Lease by Auction and Application.	Village Allotments.	Small Grazing-runs.		Pastoral Runs.		Total.
		Ordinary Crown Land.	National-endowment Land.	Cheviot Estate.	Land for Settlements.				Ordinary Crown Land.	National-endowment Land.	Ordinary Crown Land.	National-endowment Land.	
	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.
Auckland ..	41,943	2,179	16,759	..	422	672*	1,057	..	4,272	6,290	710†	..	74,304
Hawke's Bay	13,034	..	..	..	26,481	211	451	..	..	..	..	..	40,177
Taranaki ..	22,325	..	1,541	..	..	152	..	..	..	..	..	..	24,018
Wellington ..	8,542	4	981	..	239	19	85	109	..	..	..	..	9,979
Nelson ..	1,214	1,602	516	..	..	..	..	9	..	..	..	..	3,341
Marlborough	10,131	..	..	..	15	..	..	..	..	..	1,590	..	11,736
Westland ..	..	1,714	3,282	..	..	20	343	1	..	..	..	..	5,360
Canterbury ..	..	..	..	634	96,196	63	..	..	..	13,120	445	6,600	117,058
Otago ..	1,787	1,602	144	..	4,077	94	..	21	8,300	11,622	..	..	27,647
Southland ..	15,148	5,188	..	..	3,369	132	46	..	..	..	..	..	23,883
Totals ..	114,124	12,289	23,223	634	130,799	1,363	1,982	140	12,572	31,032	2,745	6,600	337,503

* Includes 13 acres land for settlements. ‡ Hauraki pastoral leases.

LANDS SELECTED DURING THE YEAR.

The Crown lands selected during the year under all tenures totalled 968,925 acres by 2,159 selectors. The principal selections were under the occupation-with-right-of-purchase and renewable-lease tenures. As an indication of the popularity of the former tenure it might be mentioned that out of an area of 114,834 acres disposed of in 391 holdings under the optional system, 336 holdings, aggregating 102,217 acres, were taken up under the occupation-with-right-of-purchase tenure. Of the selections under renewable lease the 301 holdings under the Land for Settlements Act, aggregating 130,961 acres, were the most important. These for the most part comprise the nineteen new settlements disposed of during the year and referred to in the paragraph under the heading of "Lands purchased and dealt with under the Land for Settlements Act."

The usual tables showing the selections during the year and the total area held under lease and license arranged under the different tenures are attached hereto :—

TABLE B.—RETURN SHOWING SELECTIONS DURING THE YEAR ENDED 31ST MARCH, 1913.

Tenure.	Number.	Area taken up.		
		A.	R.	P.
Ordinary Crown Lands,—				
Cash lands	331	4,573	0	3
Occupation with right of purchase	359	104,766	2	12
Renewable lease	16	3,413	3	39
Mining districts land-occupation leases	36	773	1	11
Village settlement, cash	1	1	0	8
,, renewable lease	10	81	1	38
Improved-farm special settlement	3	168	0	0
Small grazing-runs	..	..		
Pastoral runs	26	297,921	1	24
Pastoral licenses in mining districts under special regulations	72	18,583	2	6
Miscellaneous leases	509	110,925	0	1
Totals	1,363	541,207	1	22
Cheviot Estate,—				
Cash lands	1	5	0	0
Renewable lease	12	633	3	29
Miscellaneous leases	8	95	2	18
Totals	21	734	2	7
Land for Settlements,—				
Cash lands	19	46	2	7
Renewable lease	301	130,961	1	24
Miscellaneous leases	35	4,510	1	35
Totals	355	135,518	1	26
National-endowment Lands,—				
Renewable lease	237	72,493	2	14
Village renewable lease	9	21	1	13
Small grazing-runs	10	37,748	3	31
Pastoral runs	7	93,240	0	0
Pastoral licenses in mining districts under special regulations	49	10,022	2	12
Miscellaneous leases	96	77,380	2	14
Totals	408	290,907	0	4
Thermal Springs, Rotorua	12	557	3	33
Grand totals	2,159	968,925	1	12
Primary-education endowments	93	6,645	0	17
Secondary-education endowments	43	185	3	35
Primary-education endowments (cash sales)	6	15	2	29
Other endowment lands	21	9,402	3	2

TABLE C.—RETURN SHOWING THE TOTAL NUMBER OF SELECTORS, WITH THE AREA HELD AND THE ANNUAL RENTAL PAYABLE, AS AT 31ST MARCH, 1913.

NOTE.—Further details of the selectors under the various tenures are given in Table 27.

Tenure.	Ordinary Crown Lands.			Cheviot Estate.			Land for Settlements.		
	Selectors.	Area held.	Yearly Rental or Instalment payable.	Selectors.	Area held.	Yearly Rental payable.	Selectors.	Area held.	Yearly Rental payable.
		A. R. P.	£ s. d.		A. R. P.	£ s. d.		A. R. P.	£ s. d.
Deferred payment (all classes)	24	2,668 2 9	46 7 4	..	..	..	..	..	..
Perpetual lease (all classes)	739	72,226 1 0	2,949 10 10	..	..	..	..	..	..
Occupation with right of purchase (all classes)	5,791	1,829,536 3 12	109,984 8 11	..	..	..	..	..	..
Lease in perpetuity (all classes)	7,225	1,608,655 3 4	60,163 12 11	210	26,865 3 25	7,294 5 10	3,652	665,651 3 35	193,083 4 9
Lease in perpetuity freehold (deferred payment)	6	154 2 33	30 16 4	..	..	..	..	..	..
Renewable lease (all classes)	320	28,114 1 17	3,138 4 0	13	644 3 36	496 1 4	1,345	484,783 2 26	108,041 18 1
Mining districts land-occupation leases	651	23,749 0 33	1,245 0 2	..	..	..	..	..	..
Agricultural lease	17	550 1 0	23 7 9	..	..	..	..	..	..
Small grazing-runs	252	461,412 2 29	20,958 8 0	34	45,021 1 32	6,424 3 2	115	203,322 2 15	26,709 13 0
Pastoral runs	441	6,980,983 2 32	42,112 18 8	1	1,642 0 0	193 3 8	4	1,739 3 13	174 16 0
Pastoral licenses in mining districts under special regulations	408	96,592 2 17	2,164 17 4	..	..	..	..	..	..
Miscellaneous leases	4,292	668,995 1 19	19,301 17 6	52	1,181 2 8	250 12 8	266	11,234 1 12	2,231 19 9
Totals	20,166	11,773,640 1 5	262,119 9 9	310	75,355 3 21	14,658 6 8	5,382	1,366,732 1 21	330,241 11 7

Tenure.	National-endowment Land.			Totals.		
	Selectors.	Area held.	Yearly Rental payable.	Total Number of Selectors.	Total Area held.	Total Yearly Rental or Instalment payable.
		A. R. P.	£ s. d.		A. R. P.	£ s. d.
Deferred payment (all classes)	..	..	..	24	2,668 2 9	46 7 4
Perpetual lease (all classes)	..	..	..	739	72,226 1 0	2,949 10 10
Occupation with right of purchase (all classes)	..	..	..	5,791	1,829,536 3 12	109,984 8 11
Lease in perpetuity (all classes)	..	..	..	11,087	2,301,173 2 24	260,541 3 6
Lease in perpetuity freehold (deferred payment)	..	..	..	6	154 2 33	30 16 4
Renewable lease (all classes)	1,743	451,218 2 17	19,209 10 11	3,421	964,761 2 16	130,885 14 4
Mining districts land-occupation leases	1	12 0 0	1 0 0	652	23,761 0 33	1,246 0 2
Agricultural lease	..	..	..	17	550 1 0	23 7 9
Small grazing-runs	513	1,715,472 3 10	32,372 3 7	914	2,425,229 2 6	86,464 7 9
Pastoral runs	199	3,823,649 2 37	34,384 2 3	645	10,808,015 1 2	76,865 0 7
Pastoral licenses in mining districts under special regulations	294	56,521 0 11	1,294 4 6	702	153,113 2 28	3,459 1 10
Miscellaneous leases	593	277,734 1 30	2,297 12 7	5,203	959,145 2 29	24,082 2 6
Totals	3,343	6,324,608 2 25	89,558 13 10	29,201	19,540,337 0 32	696,578 1 10
Thermal springs	..	..	..	331	4,057 1 33	2,252 15 6
Grand totals	..	..	..	29,532	19,544,394 2 25	698,830 17 4
Educational endowments (Education Reserves Acts)	..	..	..	3,382	772,353 1 3	72,032 3 1
Other endowments	..	..	..	898	403,310 2 14	15,428 5 0

NATIONAL-ENDOWMENT AREA.

The total area of national-endowment land held under lease or license at the close of the year was 6,324,608 acres, at a yearly rental of £89,559. The area within this endowment is now 8,551,250 acres, in terms of section 258 of the Land Act, 1908. This area is constantly being added to by selections of ordinary Crown land under the renewable-lease tenure, and by conversions from the other tenures to renewable lease.

IMPROVED-FARM SETTLEMENTS.

The area of Crown land that has been dealt with under this system of land-settlement is 115,941 acres. Of this area, 8,169 acres has been acquired in fee-simple by 94 settlers under the right of purchase conferred by their leases. The balance—viz., 107,772 acres—is at present held by 803 settlers.

The reports of the various Commissioners of Crown Lands, published in Appendix I, go to show that very satisfactory progress is being made on the settlements recently established, many of the settlers having commenced dairying operations, the Government supplying stock where necessary upon suitable terms of repayment.

INSPECTIONS BY CROWN LANDS RANGERS.

During the past year the holdings of 9,096 Crown tenants were inspected by the Rangers on the staff of the Department, the area covered by such inspections being, as shown in the table following, 3,910,178 acres. The improvements actually effected by these tenants were found to be well in advance of the requirements laid down by law, and the defaulters were not above the average of former years.

TABLE D.—RETURN OF NUMBER OF INSPECTIONS MADE BY THE RANGERS FOR THE YEAR ENDED 31ST MARCH, 1913.

District.	Number of Properties visited.	Area.	Value of Improvements.		Number of Defaulters.				
			Required.	Actually made.	For Deficient Improvements only.	For Non-residence only.	For Non-residence and Improvements.	For other Reasons.	Total.
		A. R. P.	£ s. d.	£ s. d.					
Auckland ..	1,365	299,383 2 26	178,205 10 9	421,926 4 9	48	117	107	..	272
Hawke's Bay ..	644	336,078 0 8	241,991 19 0	714,259 1 5	10	42	..	..	52
Taranaki ..	377	112,176 2 1	51,569 0 0	149,006 0 0	24	7	1	..	32
Wellington ..	1,462	403,085 0 0	74,086 0 0	204,921 0 0	50	43	2	..	95
Nelson	697	289,061 0 0	64,675 0 0	132,758 0 0	73	96	48	..	217
Marlborough ..	564	313,165 3 39	138,627 15 6	322,447 1 1	8	27	..	..	35
Westland ..	479	24,673 3 15	18,719 10 1	84,593 0 0	17	39	3	1	60
Canterbury ..	1,856	1,367,611 0 15	411,664 17 2	719 499 10 6	103	9	5	26	143
Otago	1,168	686,781 2 26	226,451 3 3	401,326 17 8	161	58	..	..	219
Southland ..	484	78,161 1 38	77,735 0 10	129,384 7 6	26	11	16	..	53
Totals ..	9,096	3,910,178 1 8	1,483,725 16 7	3,280,121 2 11	520	449	182	27	1,178

REVENUE.

The sum collected during the year amounted to £912,028 17s. 2d. The amount received in each land district was as follows:—

TABLE E.—RETURN OF GROSS REVENUE RECEIVED DURING THE YEAR ENDED 31ST MARCH, 1913.

Land District.	Amount received.
	£ s. d.
Auckland	156,947 6 11
Hawke's Bay	121,153 11 6
Taranaki	48,252 14 6
Wellington	111,098 11 7
Nelson	34,101 15 7
Marlborough	36,895 12 0
Westland	21,886 18 2
Canterbury	202,256 13 11
Otago	126,545 11 4
Southland	52,890 1 8
Total	912,028 17 2

The amount received during the last decade is appended for comparison:—

TABLE F.—COMPARATIVE STATEMENT SHOWING THE GROSS REVENUE RECEIVED EACH YEAR DURING THE PAST TEN YEARS.

Year ended 31st March.	Amount received. £ s. d.
1904	497,211 3 11
1905	508,920 0 0
1906	549,628 19 2
1907	578,233 0 7
1908	658,794 11 5
1909	696,375 3 5
1910	674,907 6 5
1911	784,843 5 5
1912	893,058 14 9
1913	912,028 17 2

REBATES OF RENT.

These rebates are granted on account of punctual payment of rent, and have been in vogue since the passing of the Crown Tenants' Rent Rebate Act, 1900, and section 52 of the Land for Settlements Consolidation Act, 1900—a period of thirteen years. The amount of rebate allowed last year was £41,072·19s. 6d. For purposes of comparison I append a statement giving the amount granted each year since the law was passed.

TABLE G.—RETURN SHOWING THE REBATES OF RENT GRANTED TO CROWN TENANTS SINCE THE COMING INTO OPERATION OF THE CROWN TENANTS' RENT REBATE ACT, 1900, AND SECTION 52 OF THE LAND FOR SETTLEMENTS CONSOLIDATION ACT, 1900.

Year ended 31st March.	Total Rebates granted. £ s. d.
1901	2,317 13 9
1902	8,054 11 6
1903	9,212 17 0
1904	13,604 13 4
1905	16,606 19 9
1906	20,676 12 10
1907	24,663 3 0
1908	27,108 18 2
1909	28,882 15 11
1910	31,836 17 3
1911	35,584 16 10
1912	37,994 13 8
1913	41,072 19 6
Total	297,617 12 6

PAYMENT OF "THIRDS" AND "FOURTHS" TO LOCAL BODIES.

In accordance with the provisions of the Land Act one-third of the price or value of the periodical payments and rental of all lands disposed of under the Land Act upon deferred payments, occupation with right of purchase, perpetual lease, lease in perpetuity, and renewable lease, and one-fourth of the rental of every small grazing-run, has to be paid to the local authority of the district where the land is situated for the construction or maintenance of roads and bridges leading to or opening up the land from which the money is derived. Generally speaking, these payments continue for a period of fifteen years from the date when the area is selected.

During the past year the amount so paid was £42,287 12s. 8d. for "thirds" and £4,559 10s. 9d. for "fourths," a total of £46,847 3s. 5d.

The figures for the past ten years are given in the following table, and show that the local bodies received from this source a sum of £346,345 4s. 2d.

TABLE H.—STATEMENT SHOWING, FOR THE TEN YEARS ENDED 31ST MARCH, 1913, THE PAYMENTS TO LOCAL BODIES FROM "THIRDS" OF DEFERRED-PAYMENT, PERPETUAL-LEASE, OCCUPATION-WITH-RIGHT-OF-PURCHASE, RENEWABLE-LEASE, AND LEASE-IN-PERPETUITY LANDS; AND "FOURTHS" OF SMALL GRAZING-RUNS.

Year ended 31st March.	"Thirds."	"Fourths."	Total Payments.
	£ s. d.	£ s. d.	£ s. d.
1904	27,974 9 1	4,443 9 5	32,417 18 6
1905	32,646 5 6	4,782 19 3	37,429 4 9
1906	23,107 4 3	3,401 3 5	26,508 7 8
1907	24,890 14 2	4,173 9 10	29,064 4 0
1908	27,276 12 1	3,433 16 9	30,710 8 10
1909	32,732 6 2	2,608 10 4	35,340 16 6
1910	25,705 3 2	4,021 9 6	29,726 12 8
1911	40,156 16 8	4,777 12 1	44,934 8 9
1912	29,091 17 8	4,274 1 5	33,365 19 1
1913	42,287 12 8	4,559 10 9	46,847 3 5
Totals	305,869 1 5	40,476 2 9	346,345 4 2

"HALVES" FROM TIMBER AND FLAX ROYALTIES.

In 1905 the Legislature decreed that local bodies were to receive half the royalties paid to the Crown on account of timber and flax obtained or cut upon Crown lands. For the year ended 31st March last the local bodies in whose districts timber and flax were being utilized and for which royalties were paid to the Crown received the sum of £14,302 4s. 10d.

The following table shows that the total amount paid under this heading since the passing of the Act aggregates £98,029 14s. 7d. :—

TABLE I.—STATEMENT SHOWING, FOR THE SEVEN YEARS ENDED 31ST MARCH, 1913, THE PAYMENTS OF "HALVES" TO LOCAL BODIES OUT OF TIMBER AND FLAX ROYALTIES.

Year ended 31st March.	"Halves" paid.
	£ s. d.
1907	12,569 2 11
1908	15,434 6 9
1909	20,515 18 2
1910	9,455 11 6
1911	11,929 19 5
1912	13,822 11 0
1913	14,302 4 10
Total	98,029 14 7

LAND PURCHASED AND DEALT WITH UNDER THE LAND FOR SETTLEMENTS ACT.

During the year nineteen new estates were subdivided into 242 farms or holdings, aggregating an area of 128,138 acres, and offered for selection. Two of the estates were situated in the Hawke's Bay District, fourteen in Canterbury, two in Otago, and one in Southland. Details are given in the following table :—

TABLE J.—RETURN SHOWING THE ESTATES OPENED FOR SELECTION DURING THE YEAR ENDED 31ST MARCH, 1913, UNDER THE LAND FOR SETTLEMENTS ACT, 1908.

Land District.	Name of Estate.	Number of Holdings offered for Selection.	Areas opened for Selection.
			A. R. P.
Hawke's Bay	Sherenden	21	10,302 3 0
"	Waihau	21	16,163 0 0
Canterbury	Timaunga	17	5,957 1 0
"	Four Peaks	8	12,742 0 20
"	Avenel	17	1,751 1 10
"	Valverde	11	2,312 2 30
"	Winchester	10	789 0 0
"	Aylesbury	6	1,006 3 10

TABLE J.—RETURN SHOWING THE ESTATES OPENED FOR SELECTION DURING THE YEAR ENDED 31ST MARCH, 1913, UNDER THE LAND FOR SETTLEMENTS ACT, 1908—*continued.*

Land District.	Name of Estate.	Number of Holdings offered for Selection.	Areas opened for Selection.		
			A.	R.	P.
Canterbury—*continued*	Waimate	34	1,585	3	5*
,,	Bourndale	7	1,618	0	0
,,	Claremont	11	2,267	0	20
,,	Timaunga Extension	7	2,158	1	32
,,	Avenel Extension	9	1,849	0	20
,,	Mount Nessing	11	34,791	2	0
,,	Ashwick	8	25,194	1	0
,,	Strathmore	3	1,401	3	20
Otago	Elderslie No. 2	14	1,633	2	14
,,	Otanomomo	17	1,280	1	10†
Southland	Maori Hill	10	3,369	0	12‡
Totals	19 estates	242	128,174	0	3

* Excluding an area of 43 acres and 7 perches withheld for workers' dwellings. † Excluding an area of 509 acres 2 roods 31 perches withheld from selection. ‡ Excluding an area of 134 acres 2 roods 27 perches withheld on account of flax rights.

The total number of holdings occupied under the provisions of the Land for Settlements Act now number 5,379, aggregating 1,366,518 acres, from which accrues an annual rental of £329,890. The number of sheep depastured on the lands is estimated at 1,010,000, horses 19,100, cattle and other stock 85,700. The total value of improvements at the date of last inspection was £2,371,366.

The usual table giving the names of the various estates purchased and settled throughout the Dominion, the principal purposes for which the holdings are utilized, and generally the present position and future prospects of these estates, is appended.

TABLE K.—SUMMARY OF THE SETTLEMENTS ESTABLISHED UPON ESTATES ACQUIRED AND DEALT WITH, UNDER THE PROVISIONS OF THE LAND FOR SETTLEMENTS ACT, UP TO THE 31ST MARCH, 1913.

Land District and Name of Settlement.	Selectors.	Residences.	Principal Purpose for which Holdings are utilized.	Progress during Year.	Present Position.	Prospects.
Auckland—						
Bickerstaffe	34	28	Grazing	Fair	Fair	Hopeful.
Cradock Hamlet	14	14	Homes, orchard, and poultry	,,	Good	Good.
Eccleston No. 2	5	2	Homes	,,	Fair	,,
Fencourt	41	38	Dairying	Good	Excellent	Excellent.
Hetana Hamlet	88	83	Homes and orchard	Fair	Good	Good.
Karapiro	16	13	Dairying	Satisfactory	,,	,,
Kitchener Hamlet	12	12	Homes and orchards	Fair	,,	,,
Mangawhero	20	18	Dairying	Good	,,	,,
Mangapouri	11	10	,,	Satisfactory	,,	,,
Matamata	226	189	,,	Good	,,	,,
Methuen Hamlet	30	30	Homes, orchard, and poultry	Fair	,,	,,
Okauia	10	10	Dairying	Good	Fair	Fair.
Opouriao	100	83	,,	,,	Excellent	Excellent.
Plumer Hamlet	17	17	Homes, orchard, and poultry	Fair	Good	Good.
Rangiatea	20	19	Dairying	Good	,,	,,
Rewi	9	8	Grazing	Fair	Fair	Fair.
Selwyn	122	96	,,	Satisfactory	Good	Good.
Tautari	40	35	,,	Fair	Fair	Fair.
Teasdale	91	82	Homes and businesses	Good	Good	Good.
Waari Hamlet	33	32	Homes and orchard	Fair	,,	,,
Waimana	29	23	Dairying	Good	,,	,,
Whitehall	16	12	,,	Satisfactory	,,	,,
Totals	984	854				
Hawke's Bay—						
Argyll	62	61	Agricultural and pastoral	Satisfactory	Satisfactory	Good.
Clydebank	24	21	,,	Very fair	Very fair	,,
Elsthorpe	49	31	Pastoral	Good	Good	
Forest Gate	29	27	Agricultural and pastoral	,,	,,	,,
Hatuma	76	66	,,	,,	,,	,,
Kanakanaia	7	7	Pastoral	,,	,,	Very good.
Kumeroa	15	14	Pastoral and dairying	Fair	Prosperous	Good.
Lindsay	68	63	Agricultural and pastoral	Satisfactory	Satisfactory	,,
Mahora	34	31	Agricultural, dairying, and fruit-growing	Good	Good	Very good.

TABLE K.—SUMMARY OF THE SETTLEMENTS ESTABLISHED UPON ESTATES ACQUIRED AND DEALT WITH, UNDER THE PROVISIONS OF THE LAND FOR SETTLEMENTS ACT, UP TO THE 31ST MARCH, 1913—*continued*.

Land District and Name of Settlement.	Selectors.	Residences.	Principal Purpose for which Holdings are utilized.	Progress during Year.	Present Position.	Prospects
Hawke's Bay—*contd.*						
Mangatahi	23	22	Pastoral	Fair	Good	Good.
Manga-a-toro	26	26	,,	Good	Prosperous	,,
Ngatapa	27	24	Agricultural and pastoral	,,	Good	,,
Pouparae	9	9	,,	,,	,,	,,
Pourerere	6	6	Pastoral	Fair	,,	Fair.
Raureka	19	17	Agricultural, dairying, and fruit-culture	Very good	Prosperous	Very good.
Raumati	30	30	Dairying	Fair	Fair	Good.
Sherenden	21	..	Agricultural and pastoral	Not yet inspected.		
Te Arai	53	53	,,	Good	Good	Very good.
Te Mata	9	8	Fruit-culture	Fair	,,	Good.
Tomoana	13	12	Agricultural, dairying, and fruit-culture	Very good	Prosperous	Very good.
Tongoio	12	10	Pastoral	Not satisfactory	Not satisfactory	Fair.
Waimarie	18	16	Agricultural	Good	Good	Good.
Waipuka	1	1	Pastoral	,,	,,	,,
Wigan	17	18	,,	Very good	Very good	Excellent.
Willows	22	16	Agricultural	Good	Good	Good.
Waihau	16	..	Pastoral	Not yet inspected.		
Totals	686	589				
Taranaki—						
Clandon	7	5	Dairying and grazing	Good	Good	Good.
Huinga	10	10	,,	,,	,,	,,
Spotswood	32	24	Homesteads	Excellent	,,	Very good.
Tokaora	16	14	Dairying	Good	Excellent	Good.
Totals	65	53				
Wellington—						
Aorangi	37	38	Dairying and fruit-growing	Good	Excellent	Very good.
Carrington	31	28	Grazing and dairying	Satisfactory	Good	Fair.
Dyer	36	39	Grazing, dairying, and cropping	Steady	Excellent	Very good.
Epuni	42	43	Market-gardening, residential, &c.	Satisfactory	Good	Excellent.
Hawtrey	32	29	Residential, &c.	Steady	Fair	Fair.
Hikawera	3	3	Grazing sheep and cattle	,,	Excellent	Very good.
Langdale	31	24	Grazing	Good	Good	Good.
Linton	5	5	Dairying and cropping	,,	,,	,,
Longbush	7	7	Grazing and dairying	Steady	Excellent	Very good.
Mahupuku	8	8	,,	,,	,,	,,
Mangawhata	7	7	,,	Excellent	Good	,,
Maungaraki	19	19	Grazing, keeping pigs, poultry, &c.	Satisfactory	Fair	Fair.
Normandale	30	33	Ditto	Little progress	Doubtful	Uncertain.
Ohakea	16	15	Dairying, cropping, &c.	Good	Excellent	Very good.
Paparangi	36	36	Residential, pigs, and poultry farms	Satisfactory	Good	Good.
Tablelands	9	9	Grazing sheep and cattle	Steady	Excellent	Very good.
Tawaha	24	25	Grazing, dairying, and cropping	Good	Prosperous	Good.
Te Matua	13	12	Dairying and grazing	,,	Excellent	Very good.
Totals	386	380				
Nelson—						
Braeburn	20	19	Pastoral	Good	Good	Very good.
Wangapeka	15	12	Pastoral and agricultural	,,	,,	,,
Totals	35	31				
Marlborough—						
Blind River	18	12	Sheep-farming and grain-growing	Fair	Good	Good.
Flaxbourne	127	90	,, ,,	Good	Satisfactory	,,
North Bank	10	7	Sheep-farming	Fair	,,	Doubtful.
Omaka	13	11	Sheep-farming and light cropping	Satisfactory	Sound	Good.
Puhipuhi	2	1	Grazing	Little	Fair	Fair.
Rainford	11	11	Dairying	Satisfactory	Excellent	Very good.
Richmond Brook	12	10	Sheep-farming and grain-growing	,,	Good	,,
Starborough	189	106	,, ,,	,,	,,	Excellent.
Waipapa	4	4	Grazing	Fair	Satisfactory	Fair.
Totals	386	252				
Westland—						
Kokatahi	8	7	Dairying and grazing	Good	Very satisfactory	Good.
Poerua	23	15	,,	,,	Ditto	,,
Totals	31	22				

TABLE K.—SUMMARY OF THE SETTLEMENTS ESTABLISHED UPON ESTATES ACQUIRED AND DEALT WITH, UNDER THE PROVISIONS OF THE LAND FOR SETTLEMENTS ACT, UP TO THE 31ST MARCH, 1913—*continued.*

Land District and Name of Settlement.	Selectors.	Residences.	Principal Purpose for which Holdings are utilized.	Progress during Year.	Present Position.	Prospects.
Canterbury—						
Albury	75	58	Mixed farming	Good	Most prosperous	Excellent.
Allanholme	8	8	"	"	Good	Good.
Annan	43	43	Part pastoral, part mixed farming, part business sections	Satisfactory	"	Very good.
Ashley Gorge	10	10	Part agricultural, part pastoral	Moderate	Very good	Good.
Avenel	16	..	New settlement: No report.			
Avenel Extension	8	..	" "			
Aylesbury	6	6	Agriculture	Moderate	Fair	Fair.
Ashwick	8	..	New settlement: No report.			
Bourndale	6	..	" "			
Braco	14	14	Market-gardening	Moderate	Good	Good.
Buddo	14	13	Market-gardening and workers' homes	Fair	Fair	"
Chamberlain	20	20	Mixed farming	Good	Most prosperous	Excellent.
Clandeboye	10	10	Principally dairying	"	Good	Good.
Clandeboye No. 2	6	6	"	"	"	"
Claremont	11	..	New settlement: No report.			
Culverden	47	42	Agricultural, pastoral, and commercial	Good	Good	Good.
Douglas	31	23	Mixed farming	Indifferent	Indifferent	Doubtful.
Drayton	20	17	Agricultural	Fair	Fair	Fair.
Eccleston	4	4	Mixed farming	Good	Good	Good.
Epworth	2	1	"	Indifferent	Indifferent	Indifferent.
Four Peaks	8	..	New settlement: No report.			
Fyvie	5	5	Agricultural and grazing	None	Bad	Bad.
Hekeao	15	13	Mixed farming	Good	Good	Good.
Highbank	80	60	"	"	"	"
Hornby	18	14	Market-gardening and workers' homes	Fair	Fair	Fair.
Horsley Downs	26	22	Agricultural	Good	Good	Very good.
Kaimahi	13	13	Market-gardening	Moderate	Fair	Fair.
Kapua	12	12	Small farming and dairying	Good	Good	Good.
Kapuatohe	14	12	Market-gardening and workers' homes	Moderate	Fair	Fair.
Kereta	4	3	Dairying	Good	Good	Good.
Kinloch	30	29	Pastoral, agricultural, dairying, and grass-seeding	"	"	"
Kohika	15	15	Mixed farming	"	Very good	Very good.
Kohika No. 2	4	4	"	"	"	"
Ladbrooks	13	11	Dairying and agriculture	Moderate	Moderate	Moderate.
Lyndon	8	8	Mixed farming	Satisfactory	Good	Good.
Lyndon No. 2	9	9	Mixed farming and pastoral	"	"	"
Marawiti	13	11	Mixed farming	Good	"	"
Maytown	11	11	Small farming and dairying	"	"	"
Mead	21	19	Mixed farming	"	"	"
Meadows	14	14	Small farming and dairying	Fair	Fair	Fair.
Mills	21	21	" "	Good	Good	Good.
Morice	31	29	Dairying, grass-seeding, and grazing	Fair	"	"
Mount Nessing	11	..	New settlement: No report.			
Orakipaoa	27	24	Small farming	Very good	Very good	Very good.
Otaio	9	7	Small farming and dairying	Good	Good	Good.
Otarakaro	7	7	Market-gardening	Moderate	"	"
Papaka	9	9	Mixed farming	Good	Very good	Very good.
Pareora	28	24	Small farming	"	Good	Good.
Pareora No. 2	32	32	Mixed farming	"	Most prosperous	Excellent.
Patoa	4	2	Mostly pastoral	Moderate	Fair	Fair.
Pawaho	25	25	Workers' homes	"	Good	Good.
Peaks	12	2	Mixed farming	Fair	Fair	"
Puhuka	10	10	Workers' homes	Good	Very good	Very good.
Punaroa	17	17	Mixed farming	"	Most prosperous	Excellent.
Raincliff	1	1	Pastoral	"	Good	Good.
Rakitairi	22	20	Mixed farming	"	"	"
Rapuwai	5	5	Principally sheep	"	"	"
Rautawiri	6	6	Mixed farming	"	"	"
Roimata	29	26	Workers' homes and gardening	Moderate	"	"
Rosebrook	14	14	Small farming	Good	"	"
Rosewill	154	143	Mixed farming and pastoral	"	Very prosperous	Very good.
Ruapuna No. 2	15	12	Mixed farming	"	Good	Good.
Scargill	7	3	Agricultural	Moderate	Fair	Improving.
Sherwood Downs	26	..	Pastoral and mixed farming	Good	Good	Good.
Stoke	7	7	Agricultural	"	"	Fair.
Studholme Junction	4	2	Small farming	"	"	Good.
Strathmore	3	..	New settlement: No report.			
Takitu	5	5	Pastoral	Good	Very prosperous	Excellent.

Table K.—Summary of the Settlements established upon Estates acquired and dealt with, under the Provisions of the Land for Settlements Act, up to the 31st March, 1913—*continued.*

Land District and Name of Settlement.	Selectors.	Residences.	Principal Purpose for which Holdings are utilized.	Progress during Year.	Present Position.	Prospects.
Canterbury—*continued.*						
Tamai	40	39	Workers' homes	Moderate	Good	Good.
Tarawahi	28	27	Workers' homes and gardening	,,	,,	..
Timaunga	17	..	New settlement: No report.			
Timaunga Extension	2	..	,, ,,			
Tripp	24	24	Sheep and agriculture	Good	Good	Good.
Valverde	9	..	New settlement: No report.			
Waiapi	15	14	Mixed farming	Good	Good	Good.
Waikakahi	183	154	Mixed farming and pastoral	,,	Most prosperous	Excellent.
Waimate	29	..	New settlement: No report.			
Wharenui	26	26	Market-gardening and workers' homes	Moderate	Good	Good.
Wincheseter	9	..	New settlement: No report.			
Homestead-sites	9	4				
Miscellaneous occupation licenses	53	..				
Totals	1,677	1,301				
Otago—						
Airedale	12	11	Mixed farming	Good	Good	Very good.
Ardgowan	66	52	General and dairy-farming	,,	,,	,,
Aviemore	1	1	Pastoral	,,	,,	..
Barnego	24	19	General and dairying	,,	,,	..
Conical Hills	45	28	General farming	Very fair	Fair	Fair.
Duncan	6	4	Dairying and general farming	Fair	,,	,,
Earnscleugh	13	9	Fruitgrowing	Good	Very satisfactory	Good.
Elderslie	35	24	General and mixed farming	,,	Very good	,,
Elderslie No. 2	14	11	General and dairying	Medium	Medium	Fair.
Greenfield	42	40	General and mixed farming	Very good	Very good	Good.
Janefield	21	19	Dairying and fruitgrowing	Good	Sound	,,
Kauroo Hill	41	30	Mixed farming	,,	,,	,,
Kurow	14	13	Dairying, &c.	,,	,,	,,
Maerewhenua	75	56	General farming	,,	,,	,,
Makareao and Extension	35	22	,,	,,	,,	..
Matakanui	3	2	Mixed farming	Indifferent	Not satisfactory	Not good.
Meadowbank	11	7	,,	Good	Good	Good.
Momona	14	13	Dairying and mixed farming	Very good	Very sound	Very good.
Otanomomo	9	..	Not inspected yet.			
Otekaike	65	52	General farming	Good	Fair	Fair.
Plunket	18	18	General and dairying	,,	Good	Good.
Pomahaka Downs	27	19	General farming	,,	Fair	,,
Puketapu	11	8	Dairying	,,	Good.	,,
Rugged Ridges	1	1	Pastoral	,,	,,	Very good.
Spottis Creek	1	1	,,	,,	,,	,,
Steward	48	43	General farming	,,	,,	,,
St. Helens	3	3	,,	,,	,,	..
Tahawai	8	8	Dairying	,,	,,	..
Taumata	9	9	General farming	,,	,,	..
Teaneraki	23	13	Dairying	Fair	Fair	Fair.
Tokarahi	79	42	General farming and dairying	Good	Good	Good.
Totara	27	25	General and dairying	Fair	Fair	Fair.
Windsor Park No. 1	37	24	,,	,,	Good	Good.
Windsor Park No. 2	10	8	,,	,,	,,	,,
Totals	848	635				
Southland—						
Beaumont	12	11	Mixed farming	Fair	Fair	Fair.
Edendale	147	126	Farming and dairying	Very good	Very good	Excellent.
Ermedale	13	12	,,	Good	Good	Good.
Glenham	39	45	Farming, grazing, and dairying	,,	,,	..
Maori Hill	6	..	Only selected end of March, 1913.			
Merrivale	50	40	Dairying and grazing	Good	Good	Good.
Otehu	6	5	Farming and grazing	Fair	Satisfactory	Fair.
Ringway	8	8	,,	Good	,,	,,
Totals	281	247				
Grand totals	5,379	4,364				

EDUCATIONAL ENDOWMENTS.

The primary- and secondary-education endowment reserves which came under the jurisdiction of the various Land Boards and the Department upon the passing of the Education Reserves Amendment Act, 1910, have received careful administration during the past year.

As much as possible of the remaining unlet reserves were advertised for selection, and every effort was made to dispose of the lands at satisfactory rentals. The area taken up was 6,831 acres by 136 selectors, the annual rental payable being £1,401 7s. 8d. During the year the leases of 111 holdings, covering an area of 9,831 acres, annual rental £1,216 19s., expired. Eighty-four of these, covering an area of 8,537 acres, were again renewed at increased rentals totalling £1,824 1s. 2d.

The gross receipts during the year were £71,398 3s. 3d., £63,023 18s. 9d. being received from "primary" reserves, and £8,374 4s. 6d. from "secondary" reserves.

Further particulars of these endowments are given in Table 31 in the Appendix.

CEMETERIES.

Trustees were appointed for seven new cemeteries during the year. The number under the supervision of the Department is now 498. Fifty-eight warrants appointing trustees for existing cemeteries were also issued. The Department as far as possible endeavours to arrange the vesting of cemeteries in the local authorities, as when this can be effected routine work is lessened, the Department being no longer concerned in supervision and the appointment of trustees.

PUBLIC DOMAINS.

During the year eleven new domains, comprising 655 acres, were brought under Part II of the Public Reserves and Domains Act, 1908. This brings the number of domains administered under the Act up to 531, containing altogether 83,332 acres (including a domain of 33,000 acres on the banks of the Wanganui River). The Boards controlling these domains are, generally speaking, administering them in a satisfactory manner. A synopsis of their reports will be prepared and laid before Parliament as usual.

KAPITI ISLAND.

The Department's caretaker resident on Kapiti Island reports that the past year has been a splendid one for birds, the nesting season being good, and food plentiful.

Three kakapos and seven kiwis were liberated on the island, and these birds should do well there, although it will be some years before it is possible to report progress.

Noxious weeds have been well kept down; only one patch each of brier and blackberry were found and dug out.

The young forest-trees are growing well.

LAND-DRAINAGE OPERATIONS.

The Land Drainage Branch has been kept very busy during the past year with matters pertaining to land-drainage and river protective works, &c.

Special reports and examinations were made in connection with the Hikurangi Swamp and Waihi Swamp, and a survey, estimate, and report, along with plans, were made in connection with the proposed Kaueranga channel improvements. A flying engineering survey of portion of the Hikurangi Swamp was also made to enable an estimate being made of the probable cost of a drainage scheme.

Inspections of works constructed by local authorities out of Government grants and subsidies were made, and vouchers totalling £2,640 9s. were certified to for payment. Plans were also approved as sent forward in the above connections.

The engineering survey of the Waikato River was taken in hand, Mr. Allan Morpeth being in local charge, with an assistant and two field parties. This is an extensive survey, as all descriptions of stream velocities and gaugings, tidal observations, and levelling data had to be obtained. Up to date the following services have been performed: Thirty-one miles of theodolite traverse; twenty miles of compass traverse; 700 soundings taken; and many tidal-gauges established and simultaneous readings taken at same. The work will occupy the parties until about next December. A great deal of the above professional work was done under tidal conditions. The cost of work to date is £839 0s. 8d., which includes purchase of an oil-launch at £200.

A small water-pumping plant was also installed at Kaingaroa prison camp.

Considerable river protective works were carried out in Waimana and Opouriao Settlements, East Coast, and great relief will thereby be given to the settlers.

The following is a summary of the work done in Waimana and Opouriao Settlements in connection with Waimana and Whakatane Rivers: Fascining banks with willows, 419·9 chains; driving willow stakes 2 ft. apart and anchoring same with cables to posts, 362·7 chains; shingle stop-banks covered with wire netting, 2,120·5 ft.; ordinary stop-banks unnetted, 727·3 ft.; stone groynes netted (3), 502 ft.; boom groynes (32), 1,808 ft.; river-diversion channels through shingle-beds scooped 60 ft. to 100 ft. wide (2), 3,125 ft. Total expenditure to date, inclusive of purchase of material, plant, and labour, £3,986 10s. 7d. This is charged against special votes obtained for the purpose.

All this work has been carefully done, and has stood well considering the severe freshes experienced while works were incomplete. These freshes naturally were a cause of extra expense to the Department.

The following large schemes were carried out by this branch, and, of course, comprise the major portion of the works: (1) Hauraki Plains drainage-works; (2) Rangitaiki drainage-works. The progress of these two large schemes are treated in separate reports

Surveys have been carried on by two field parties, which subdivided the drained areas of the Hauraki Plains, and are also engaged upon the survey of adjoining Crown land, which is roaded and bridged by this branch. The area surveyed during the year is 2,579 acres, and further surveys covering some 11,000 acres are in hand. These lands are being prepared for settlement purposes.

Surveys of some 700 acres of Native lands affecting the Hauraki Plains boundaries are also in hand.

Engineering Surveys: Some eighty miles of engineering surveys have been made in connection with the Hauraki Plains and Rangitaiki drainage-works, Waitakaruru Loan Block, Kauaeranga Channel, and Wairoa River.

Road-construction: Some 6 miles 5 chains of cart-road were duly constructed out of special grants, at a cost of £1,023 4s. 9d.

Snagging of rivers: Some seven miles and a half of the Piako and Waitoa Rivers have been snagged during the past year, at a cost of £1,529 2s. 7d. against special votes.

LAND CONFERENCE.

An event of more than usual departmental interest took place at the beginning of March last, when the several Commissioners of Crown Lands met at Wellington for the purpose of discussing matters connected with land-administration. The proceedings occupied three days, and much useful work was accomplished.

Conferences of this nature are of considerable value to the administrative officers of the Department, as they not only enable many practical difficulties of administration to be discussed and overcome, but they tend to ensure uniformity of procedure in the different land districts and to promote mutual understanding between the head and district offices. It is hoped that opportunity may be found to hold further conferences at suitable intervals.

DEPARTMENTAL CHANGES: PROMOTIONS, TRANSFERS, APPOINTMENTS, ETC.

Consequent on the promotion of Mr. James Mackenzie to the position of Surveyor-General, Mr. T. N. Brodrick was promoted from Canterbury to be Commissioner of Crown Lands and Chief Surveyor at Wellington. Mr. R. T. Sadd was transferred from Nelson District to fill the vacancy of Commissioner of Crown Lands and Chief Surveyor at Hawke's Bay occasioned by the promotion of Mr. C. R. Pollen to fill Mr. Brodrick's position in Canterbury.

Mr. F. A. Thompson, Chief Draughtsman at Napier, became Commissioner of Crown Lands and Chief Surveyor for Nelson District. Mr. H. Mackay, Land Transfer Draughtsman, District Office, Wellington, was promoted to be Chief Draughtsman at Napier, and Mr. R. S. Galbraith, District Inspecting Surveyor, Auckland, was appointed Chief Draughtsman at Invercargill in place of Mr. George Robinson, transferred to Canterbury.

Mr. W. R. Jourdain was appointed Chief Clerk, Head Office, in succession to Mr. F. T. O'Neill, appointed Assistant Under-Secretary for Lands.

Mr. G. R. N. Wright, Chief Clerk, Wellington District Office, retired on superannuation after forty years' faithful service. He was succeeded by Mr. H. M. Bannister, Chief Clerk, Taranaki, whose place was filled by the promotion of Mr. C. E. Archibald, of the Auckland Office.

Mr. R. A. Paterson, Chief Accountant and Native-land Purchase Officer, resigned from the Service, and Mr. A. C. Turnbull was appointed Chief Accountant at Head Office in his stead.

Owing to the retirement of Mr. A. A. McNab, Receiver of Land Revenue, Christchurch, the following transfers took place: Mr. G. W. Palmer, Invercargill, to Christchurch; Mr. A. D. Macfarlane, Hokitika, to Invercargill; Mr. F. E. Duncan, Accountant, Dunedin, to be Receiver of Land Revenue, Hokitika; Mr. A. W. Duncan was promoted from Wellington District Office to be Receiver of Land Revenue, Nelson, *vice* Mr. J. R. Macdonald, transferred to Auckland. Mr. P. D. N. Verschaffelt, Record Clerk, Head Office, received an appointment in the office of the Public Service Commissioner, and Mr. J. Bennett succeeded him as Record Clerk.

Messrs. F. Ward and A. Cameron, Crown Lands Rangers for Nelson and Marlborough respectively, were retired on superannuation during the year.

OFFICE WORK.

A summary showing the number of Proclamations, Orders in Council, Warrants, &c., prepared during the year, together with a summary of the expenditure approved by the Department, is appended.

SUMMARY SHOWING THE NUMBER OF PROCLAMATIONS, ORDERS IN COUNCIL, WARRANTS, AND NOTICES PREPARED AND ISSUED DURING THE YEAR ENDED 31ST MARCH, 1913.

—	Proclamations.	Orders in Council.	Warrants and Notices.	Total.
Under the Land Act and the Land for Settlements Act..	49	..	341	390
Under the Public Reserves and Domains Act	..	144	77	221
Under the Scenery Preservation Acts	33	..	4	37
Under the Native Land Act	28	..	..	28
Under the Education Reserves Acts	4	..	..	4
Under the State Forests Act	2	..	..	2
Under the Kauri-gum Industry Acts	..	4	5	9
Under the Cemeteries Act	..	..	65	65
Under the Timber-floating Act	..	..	3	3
Totals	116	148	495	759

The following have also been prepared and published:—

Sale-plan posters	150*
Monthly poster of lands offered for selection	12†
Crown Lands Guide (quarterly issues)	4‡

* 122,250 copies printed. † 3,600 copies printed. ‡ 10,750 copies printed.

SUMMARY OF EXPENDITURE APPROVED DURING THE YEAR ENDED 31ST MARCH, 1913.

Vote No.	Name of Vote or Account.	Amount voted (Net)	Expenditure (Gross).			Recoveries.			Expenditure (Net).		
		£	£	s.	d.	£	s.	d.	£	s.	d.
74	Lands and Survey	173,184	199,090	17	8	49,111	1	4	149,979	16	4
75	Lands and Survey, Miscellaneous	124,314	56,041	5	3	3,508	7	0	52,532	18	3
115	Improved-farm Settlements ...	44,150	28,242	16	1	5,922	8	0	22,320	8	1
116	Lands, Miscellaneous ...	6,000	5	18	0	...			5	18	0
117	State Forests	24,417	22,255	4	7	86	0	11	22,169	3	8
119	Scenery-preservation	11,745	17,351	11	7	480	15	0	16,870	16	7
	Totals	383,810	322,987	13	2	59,108	12	3	263,879	0	11
	Consolidated Fund, Unauthorized Account		683	11	1	...			683	11	1
	Special Acts, Deposit Accounts, &c. ...		11,860	3	3	...			11,860	3	3
	Land for Settlements Account (including Vote 120)		18,010	12	1	3	17	0	18,006	15	1
	Cheviot Estate Account		17	2	8	...			17	2	8
	Hauraki Plains Settlement Account ...		21,990	18	11	90	0	0	21,900	18	11
	Rangitaiki Land Drainage Account ...		15,203	6	0	...			15,203	6	0
	National Endowment Account		22,467	6	8	...			22,467	6	8
	Native Land Settlement Account (including Vote 135)		50,383	5	3	26,997	9	8	23,385	15	7
	Totals		140,616	5	11	27,091	6	8	113,524	19	3
	Grand totals		463,603	19	1	86,199	18	11	377,404	0	2

APPENDICES.

APPENDIX I.—SETTLEMENT OF CROWN LANDS.

EXTRACTS FROM THE REPORTS OF THE COMMISSIONERS OF CROWN LANDS ON SETTLEMENT OPERATIONS DURING THE TWELVE MONTHS WHICH ENDED ON THE 31ST MARCH, 1913.

AUCKLAND.

LANDS OPENED FOR SELECTION.

THROUGHOUT the year there has been a keen and well-sustained demand for land, not only from residents and land-seekers within the district, but also from other parts of the Dominion. The total area opened for selection during the year was 74,304 acres (exclusive of an area of 2,809 acres of education endowment lands), while the area selected, including lands remaining open from previous years, was 103,025 acres. The total number of applicants who lodged applications for lands opened was 1,951, most of these covering several sections apiece. Most of the applicants represented an excellent type of settler, and many of them came from other districts, bringing fresh capital, energy, and experience to bear upon the development of Auckland lands.

The new preference system, whereby preference at ballots is granted to those who have been unsuccessful at two ballots during the preceding two years, or who have children dependent on them, has worked smoothly since its inauguration by the Act of last session, although naturally its operation has caused some disappointment amongst those who fell under its ban. The hardship involved is not, however, great, since exclusion from a ballot on two separate occasions upon the preference ground alone qualifies for admission to subsequent ballots; while the system affords some encouragement to those most needing and anxious to select land.

THE VARIOUS TENURES.

The occupation-with-right-of-purchase tenure still maintains its position as the premier tenure of the district, the area selected under it having been 55,332 acres, or more than half of the total area taken up. The holders under this tenure now number 2,776, over one-third of all the Crown tenants in the district, and they occupy slightly over three-quarters of a million acres.

Of the settlement tenures, the lease in perpetuity comes next in order of importance, having 1,935 tenants occupying 418,401 acres.

The renewable-lease tenure, consisting principally of land-for-settlement (acquired) lands and national endowments, is the third principal tenure, its holders numbering 751 and occupying 191,328 acres.

The other tenures do not call for special remark, but it may be noted, in connection with the question of settlement of the mining lands on the Coromandel Peninsula, that an area of 15,017 acres has been selected during the year by fifty-three holders, under the two available tenures, Hauraki pastoral lease and mining-district land-occupation lease, principally the former; while the total area now held under these tenures is 78,940 acres, occupied by 441 tenants.

The total number of Crown tenants within the district is now 7,553, occupying an area of 1,983,369 acres, and paying an annual rental of £94,750.

REVENUE.

The total gross revenue received during the year was £156,947 6s. 11d., a decrease of nearly £14,000 from that of the previous year. The most noticeable falling-off is in the receipts from freehold of O.R.P. lands, which are nearly £6,000 less; and the receipts from sales of timber, which have yielded about £25,000 less. These have in some degree been counter-balanced by increases in other directions. The collection of the gross revenue for the year involved the issue of 13,798 receipts. In addition to these amounts, the Receiver of Land Revenue's office also passed through the Deposit Account a sum of £39,527, involving the issue of 2,548 receipts; and a further sum of £16,315 was passed into the Local Bodies' Deposit Account, out of which payments amounting to £20,851 were made to local bodies for expenditure on roads benefiting lands held from the Crown.

The arrears of rent unpaid at the close of the year amounted to £4,443 8s. 3d., owing by 393 tenants, occupying an area of 138,290 acres. These represent about 5 per cent. both of the number of tenants and rentals payable.

The amount of rebates granted for punctual payment of rent was £5,650.

Since the passing of the Land Laws Amendment Act, 1912, postponements of rent, owing to circumstances of necessity either from misfortune or temporarily non-productive condition of holdings, have been granted to twenty-six tenants, the amount of rent so postponed totalling £1,400.

COVERSIONS OF TENURE.

The right of acquiring the freehold has been exercised during the year by 147 settlers, occupying an area of 33,366 acres, under the perpetual-lease, occupation-with-right-of-purchase, and lease-in-perpeutity tenures.

The liberal terms on which the freehold right was granted by Parliament last session to holders of leases in perpetuity of ordinary Crown lands and renewable leases of settlement lands has, as might be expected, led to a large volume of inquiry and considerable increase of work in dealing with the applications. A few purchases of leases in perpetuity had already been completed before the close of the year, and many more were in the intermediate stages of completion. In the case of the renewable leases of settlement lands a numbr of applications had been received and placed in the hands of the Valuation Department for the valuation required by law. The result of the early valuations received shows that the terms offered will prove exceedingly favourable to the tenants, especially in cases of suburban or township lands and the older and more favoured settlements, where considerable increases of value have taken place.

During the year twelve holders, occupying an area of 3,760 acres, have exchanged from the mining district land occupation and Hauraki pastoral license tenures to renewable lease. These exchanges have hitherto been limited by the necessity for completing surveys and providing road-access prior to exchange, but as increase in the survey staff has now made it possible to put several officers on this work, there is every probability that a considerably greater number of conversions to renewable lease will be effected in the future, with corresponding benefit to the permanent settlement of the Coromandel Peninsula.

RANGERS' REPORTS AND GENERAL CONDITIONS OF SETTLEMENT.

All the Rangers report that their inspections of Crown tenants' holdings discover generally a very satisfactory extent of genuine fulfilment of the requirements of *bona fide* and permanent settlement. The residential conditions in many cases are not fulfilled as completely as might be desired, but in the remoter localities the difficulties of access and lack of schools have much to do with the question of residence, and strict enforcement would involve considerable hardship under such circumstances. When reasonable access is provided (and schools where the necessary number of scholars can be enrolled), *bona fide* settlers, as a rule, are prompt to get on to their sections. The conditions of settlement in many parts of the Auckland District still involve unavoidable hardships which render hard-and-fast enforcement of conditions inadvisable, and the genuine settler deserves, and may rest assured that he will receive, sympathetic consideration from the Land Board to any reasonable extent consistent with the interests of the State.

The past season has been an unusually dry one in all parts of the district, and to some extent this has been an advantage to many settlers who were unable to get good burns the previous year, but have now succeeded in doing so. In the northern part of the district, however, the drought has been more severe than elsewhere, and settlers have suffered not only from depreciation of revenue from the butter industry, but also from fires, which in many cases have burnt much useful pasture and fencing, and threatened homesteads with destruction. When, however, the first stress of these hardships has passed, good will result from the renewing of pastures, towards which assistance in the supply of grass-seed is being given by the Government. The large areas of bush that have been felled and successfully burned, and will now be laid down in pasture, will materially help the productiveness and prosperity of the district.

In the south-western part of the district large areas of bush felled during the past two years have been cleared by good clean burns, and will now be brought into pasture. Settlement is increasing steadily, and farmers are coming in from other districts, bringing fresh capital and energy, and dairying is progressing and adding to the prosperity of the district.

In the eastern part of the Bay of Plenty district the rough character of the country necessitates fairly large areas for sheep and cattle raising, and the progress of this part of the district is being much retarded by the difficulties of access, which deprive the settlers of a market for fat stock. The extension of the railway from Gisborne is, however, bringing a market nearer for them. In the Rotorua district the settlers have to contend with "bush-sickness," and also suffer in many parts from lack of a convenient water-supply, the only water being in inaccessible gorges. In the meanwhile the timber industry is proving of assistance to the settlers, and there appear to be grounds for hope that the clearing of the country and improvement of pastures will in course of time remove "bush-sickness."

The settlement of the plains near Waihi, which were disposed of late in 1911, has been retarded by industrial difficulties, and there is a larger proportion than usual of defaulters in this locality. This condition will, however, remedy itself before long, and the development of these lands will introduce a new factor in the prosperity of that part of the district.

In the Hauraki Plains settlement continues to progress in a very satisfactory manner. A process of natural selection has resulted in the weeding-out of settlers not fully adapted to the work of developing such lands, and their place has been taken by others with better prospects of success. The unwatering of the lands is necessarily a slow process, which cannot be hastened with advantage, but what has already been achieved shows that the successful settlement of these lands will contribute enormously to the success of the district. In the great majority of cases these settlers are complying very satisfactorily with the requirements of the law.

On the Coromandel Peninsula land is still being selected fairly freely under the Hauraki pastoral leases and mining district land occupation license tenures. These lands are almost entirely pastoral in character, although of good quality as such, and the present tenures are, notwithstanding much that has been said and written to the contrary, well adapted for their settlement. The lack of road-access is being remedied as rapidly as possible, several surveyors being engaged on the work of surveying and laying out roads.

IMPROVED-FARM SETTLEMENTS.

The three improved-farm settlements, Rangitoto Nos. 1 and 2, and Korakonui, which are still in the initial stages of their development, have made satisfactory progress during the year. In these three settlements there are now seventy-four holders, and the number of souls residing is 284. The area occupied is 10,889 acres, of which 3,530 acres have been grassed, and are now carrying 796 head of cattle; the value of improvements effected, including those paid for by Government, is £13,968.

A number of the settlers have commenced dairying during the past season, and where necessary the Government has supplied young dairy stock upon guaranteed terms of payment. The settlers are generally well satisfied with their holdings, and there seem to be good grounds for anticipating that the settlements will be self-supporting next year.

TRANSFERS.

The total number of applications for transfer dealt with during the year was 805, of which 762 were, after careful scrutiny and consideration, approved, and forty-three were refused. Noticeable amongst the applications received were a number of transfers by way of exchange for other properties, an inflated value being often fixed by both parties, while in many cases also it is found that a very small proportion of the purchase-money passes in cash. The Land Board has in all cases set its face steadily against transactions of a speculative character, and has endeavoured, as far as possible, to ensure that the prospective tenant, when approved, shall enter the property with reasonable chances of success, notwithstanding the large amount often paid by way of goodwill. These amounts are, however, it must be admitted, often justified, so far as the incoming tenant is concerned, by the general increase of values, improved facilities of communication, and other advantages. It is satisfactory to notice that the tendency to subdivide larger holdings continues, as settlers find that smaller areas can be more successfully worked and brought to a higher level of productivity.

FORFEITURES.

During the year 123 leases, covering an area of 115,009 acres, were forfeited; these, however, included three pastoral runs totalling 86,411 acres, so that the remaining area is only 28,598 acres. It is again necessary to point out that a large number of these forfeitures arise from the ill-advised practice of many persons in applying for lands which they have not personally inspected, and which, after selection, they find unsuited to their requirements. It cannot be too often repeated that such a practice is in the highest degree injudicious, and more calculated to lead to disappointment and loss to the applicant than would be the expenditure of a comparatively small amount in inspecting the land before lodging an application.

KAURI-GUM DISTRICTS SETTLEMENT.

The provisions introduced by legislation last session for the settlement of lands in kauri-gum districts have been the subject of numerous inquiries. No lands have yet been offered under this system, as it is necessary to effect surveys before the land can be proclaimed, since the indiscriminate selection permitted under the Kauri-gum Industry Act for residence and business sites is not adapted to a proper scheme of settlement providing for freehold tenure, with the attendant necessity for making adequate provision for road-access and well-considered methods of subdivision. Preliminary surveys of suitable areas are now in hand. The residence-sites under the Kauri-gum Industry Act have been very successful, and neat whares and small gardens are common.

SETTLEMENT OF PUMICE LANDS.

With the shortening supply of Crown lands available for settlement in more favoured localities, the question of settlement of the vast areas of pumice lands in the southern parts of the district is coming into prominence. Pioneer settlers have shown that these hitherto-despised lands are nevertheless capable of taking their place among the productive areas of the Dominion, and suitable proposals for their utilization are now under consideration. Meanwhile there appears to be no doubt that these lands are not "poor man's country," nor adaptable for subdivision into small areas. To bring them into fertility and maintain them in a condition of productiveness requires the expenditure of capital, as well as the provision of means for landing artificial manures on the ground as cheaply as possible, lest the cost of production be rendered prohibitive.

KAURI-GUM.

The past dry season has been a favourable one for diggers, enabling them to work swamp areas which have hitherto remained untouched, while the high prices obtained have caused areas which were supposed to be worked out to be again dug over to a greater depth. Generally speaking, however, the greater portion of the gum obtained during the season has been taken from private lands, the resources of the gum reserves being husbanded for some future time. The surface gum in many localities is becoming exhausted, but this is only the recent deposit, for the older forests lower down have left larger deposits, which will last for very many years to come.

The licenses issued during the year consisted of 590 ordinary, 1,746 special, 215 gum-buyers', and 519 residence areas, a total of 3,070, yielding a sum of £1,857 9s. The new method of collection of license fees by the police has worked well.

The export of gum for the year was 8,354 tons, valued at £430,200, practically all from the north of Auckland.

FLAX.

The prospects of the flax-milling industry are good, but it is to be regretted that in many cases a large production in quantity, rather than a high standard of quality, appears to be aimed at. The dry spring and summer have been favourable to the industry, giving better fibre and greater facilities for bleaching and drying. The export for the year has been 21,567 tons, valued at £483,353.

CROWN LANDS FOR DISPOSAL DURING THE COMING YEAR.

Exclusive of the area of 242,089 acres already lying open for selection, I anticipate that an area of about 186,000 acres will be opened and selected during the ensuing year. This area will include about 101,000 acres under the optional-selection system, 5,000 acres near Tauranga under the Land for Settlements Act, 77,000 acres of national-endowment land to be offered on renewable lease, and 3,000 acres on the Hauraki Plains. The lands are well distributed over all parts of the district.

EDUCATION ENDOWMENTS.

The total area of reserves for the endowment of primary and secondary education which are now administered by the Land Board is 126,353 acres, out of which 75,850 acres are occupied by 637 tenants paying a rental of £4,789 per annum. Steps are being taken to offer for lease as many as possible of the unlet reserves, which are, however, widely scattered, and in many cases require survey before they can be offered. An area of 2,809 acres was offered during the year, principally in small sections, but only 724 acres found tenants.

GENERAL.

Twenty-six meetings of the Land Board have been held during the year, the amount of business dealt with at each being very considerable. The general work of the office has been heavy, and has kept the staff fully engaged. Some indication of the volume of business dealt with may be gathered from the fact that the incoming and outgoing correspondence totalled over 103,000 pieces of mail-matter, an increase of about 3,000 on the preceding year. I am pleased to say that the whole staff has worked faithfully and energetically.

H. M. SKEET,
Commissioner of Crown Lands

HAWKE'S BAY.

THE SETTLEMENT OF CROWN LANDS.

During the past year the principal areas opened for selection were the Manawaangiangi Block of 11,552 acres and Te Whitiatara Block of 1,257 acres. These lands were purchased from the Natives and opened on the optional system. There was a great demand for the latter, with the exception of the homestead section, containing 61 acres, which, owing to the small area of the holding in comparison to the buildings thereon, has militated against its selection. The homestead section is generally the hardest to dispose of on most of the settlements for the above reason. The former block was not in great request, and three holdings, containing 1,525 acres, are not yet selected. Of those taken at the ballot, one has been forfeited (area, 677 acres), and three (area, 1,263 acres) are not yet occupied, and are evidently abandoned by the successful applicants.

The partial failure of the successful settlement of this block is apparently due to its distance from the nearest market at Waipukurau (thirty miles), and the bad state of the road (which has only recently been formed) from the main Waipukurau–Porangahau Road, a distance of five miles to the beginning of the block.

Several small scattered sections have also been offered, and have been readily selected.

The progress and prosperity of the older-established settlements have not been so satisfactory as usual, owing to the spring and early summer being wet and unsettled, followed by a very dry summer and early autumn. During the dry season grass-fires ran over thousands of acres, and farmers were very short of feed; also, the root crops have turned out badly, so that holders of stock are eagerly seeking temporary grazing-accommodation wherever available.

The above circumstances caused the price of stock to drop considerably, and the slaughtermen's strike also acted in the same direction.

The dairy farmer has suffered serious inconvenience and loss through the dry weather and grass-fires, not being able to keep up the usual supply of milk for the factory, and in many instances having to reduce his stock owing to the scarcity of feed. With rain and a little mild weather the feed is now beginning to improve, and there is still time for a prospect of fair winter feed. It has been a good season for fruit and grass-seed, and white crops have been fair and profitable.

Since taking charge in this district I have made myself well acquainted with all Crown lands still available for selection, and have personally visited most of the blocks. The surveyors are now busily engaged on the Crown lands available for settlement, most of which will be placed on the market during the coming year.

Disposal of remaining Crown Lands.

It is proposed to offer for sale or selection during the current year an area of 124,174 acres. The following are brief descriptions of the principal blocks:—

Tutamoe Survey District, Huiarua Block (7,700 acres): Undulating country, covered with mixed bush; formation generally papa and clay; good soil; suitable for sheep and cattle. To be subdivided into five sections, from 900 to 3,000 acres; survey completed; road-access being arranged.

Te Puia and Buckley Townships, Rakauroa and Otoko Villages (224½ acres): Small areas suitable for business or residential sites.

Motu and Ngatapa (101 acres): Mostly in grass; soil fair to good.

Pastoral Runs 11, 13, and 14, Kaweka, Pohui, and Kuripapanga (43,569 acres): The land comprises for the most part open, rugged, and broken country, with patches of stunted black-birch forest in the gullies and on hill-slopes. The soil is of a light pumice character, on slate, rock, sandstone, and in some cases gravel. The exposed surface of the tops of the ridges and spurs are wind-worn and bare of vegetation.

Pastoral Run No. 6 (5,817 acres), Waitara: Authority has been given for this area to be opened as a small grazing-run, and particulars will be forwarded for this purpose.

Patoka (3,659 acres): Open, rugged, and broken country; soil fair.

Tuahu and Waikaremoana (6,000 acres): Mostly high birch-clad country; soil inferior to fair; sandstone formation, well watered. Survey in hand. Adjoins Waipaoa Block, of 12,000 acres, recently acquired but not yet proclaimed.

Waikaremoana (8,568 acres): This block of Crown lands is not included in the total area given above, as it was formerly intended to add it to the forest reserve, but the survey is now being made for subdivision into two small grazing-runs. Particulars for offering will be forwarded early. The country is under heavy forest, undulating and hilly, part mixed bush and scrub, running up into high birch country. The subdivisons have each constructed road-access.

Waihau Settlement (4,033 acres): Undulating to easy hilly country; soil a light marl on papa formation. Mostly in grass, with patches of light fern and small manuka.

Te Arai Settlement (112 acres): Mostly flat agricultural land of good quality.

Porangahau (1,525 acres): This block is for the most part open country, partly in native and exotic grasses; a considerable amount of scrub is to be found, mostly in the gullies. Soil fair to good.

Otawhao, adjoining Takapau Township (2,373 acres): Mostly in grass. Good dairying country, to be divided into twenty-two sections. Survey well in hand.

Ahuaturanga Block, near Woodville (993 acres): The greater part of this is first-class dairying land, and the balance good sheep-country, mostly in good grass. Divided into twelve farms.

Tahoraite Block (502 acres): Open grass land; soil fair to good. Requires the acquisition of some adjoining blocks to make it suitable for subdivision for permanent tenure. An additional area of 500 acres has been purchased but not proclaimed; the surveyor has been instructed to make the survey. Formerly forest, well grassed, suitable for dairying or mixed farming, near Tahoraite Railway-station; to be subdivided into ten farms. Will be opened for selection for next season's dairying.

Timahanga Block and Omahaki Block (33,310 acres): The greater part of these blocks is undulating country, covered with bracken and patches of manuka and grass; the balance is rough broken country. The formation generally is a light chocolate loam with pumice overlying papa, and decomposed yellow slates with outcrops of limestone. Suitable access and exchanges are being made to enable profitable disposal. At present let for grazing.

Mata, adjoining Te Puia Township (223 acres): Mostly open country; soil fair to good.

Kaiwaka Block (14,033 acres): Undulating broken country, with deep gullies, mostly covered with native and exotic grasses, scrub, and manuka. The soil is for the most part pumice, overlying limestone, and in parts papa formation. Survey well in hand. To be offered early, in six small grazing-runs.

Tenures.

The total number of tenants on the books is 1,926, an increase of seventy over the previous year. The tenures are divided into four distinct classes—*i.e.*, ordinary Crown lands, 893 tenants, holding an area of 501,829 acres 2 roods, and paying an annual rental of £38,729 3s. 2d.: land for settlements, 686 tenants, holding an area of 213,894 acres and 34 perches; annual rental, £70,367 9s. 10d.: national endowments, 109 tenants, holding an area of 205,671 acres 1 rood 21 perches; annual rental, £6,319 6s. 10d.: education endowments, 238 tenants, holding an area of 87,552 acres 2 roods 24 perches; annual rental, £9,567 10s. 2d. As the total area set aside as endowments for primary and secondary education in this district totals 87,670 acres, it will be seen that all but 118 acres are leased. The administration of these leases by the Crown has brought the formerly large arrears of rent into line with ordinary leases.

Of the total area of 13,034 acres offered for selection under the optional system, 7,975 acres 1 rood was selected under the occupation-with-right-of-purchase tenure by twenty-six tenants, and 3,411 acres and 30 perches under renewable lease by six tenants, thereby indicating that the tenure under which freehold can be acquired is the most popular one.

Inspections, and Rangers' Reports.

The Crown Lands Ranger for the northern or Poverty Bay portion of the district made 395 inspections of leasehold sections held on different tenures, covering an area of 291,919 acres, and thirty-seven miscellaneous inspections. These figures show a considerable increase in the number of inspections made from last year. The value of improvements required to be done by the tenants was £190,591, whereas the Ranger valued the improvements actually effected at £596,492, and there were only seven defaulters—two for improvements and five for residence.

During the year the Crown Lands Ranger for the southern portion of Hawke's Bay District inspected and furnished reports on 249 properties. These comprised occupation-with-right-of-purchase, lease-in-perpetuity, renewable-lease, village, village-homestead special-settlement, and pastoral lands, and 198 miscellaneous inspections, valuations of education reserves, and reports on proposed schools to be established; inspections of river-snagging and blackberry-cutting contracts and fencing contract, Waipunga Valley; valuation of Sherenden and Waihau Settlements in conjunction with a special valuer; inspection and reports on noxious weeds. The total area inspected covered an area of 44,159 acres. The value of improvements required to be effected amounted to £51,400, and improvements actually effected £117,767. There were forty-five defaulters—eight for improvements and thirty-seven for residence.

BUSH FELLED AND GRASSED.

Each year the area of bush felled and grassed diminishes. The bush-clad district has already been previously selected and dealt with, but, according to the Crown Lands Ranger's report on holdings inspected, only 9,087 acres was felled and grassed. However, even this small area will add a good deal to the carrying-capacity of the land.

PURCHASE OF FEE-SIMPLE DURING THE YEAR.

During the period under review the tenants have not taken the same opportunity as in previous years of acquiring the fee-simple of their homes, only fifteen tenants, holding an area of 5,171 acres and 28 perches, taking advantage of the right granted them. As this privilege is now extended to lease in perpetuity under the Land Act and renewable lease under lands for settlements under more favourable terms, numerous inquiries have been made since the passing of the Land Laws Amendment Act, 1912, and I have no doubt that during the forthcoming year there will be more holdings made freehold than in any previous year.

FORFEITURES AND SURRENDERS.

Under these headings on lands held under permanent tenures only five holdings, aggregating an area of about 18 acres, were dealt with. Considering the number of tenants on the books (1,926), it clearly indicates that this district has the right class of people to settle on the land.

TRANSFERS.

The total number of applications to transfer submitted to the Land Board during the year was 182, of which twelve were declined.

To show the keen demand for land in this district, and the high prices paid for the goodwill of Government leasehold land, I give hereunder the total number of transfers completed under the different tenures, the area of land transferred, the value of improvements effected, together with consideration paid. The question of high values paid for land has greatly exercised the minds of the members of the Land Board, and it has been the practice for some time now to see that the incoming tenant is in a sound financial position, thereby being able to properly farm the land to advantage. It appears desirable that, to further prevent aggregation, education-endowment leases should be made subject to the limitation prescribed by Part XIII of the Land Act, 1908. At present the only condition restricting the transfer of these leases is the financial stability of the proposed transferee.

Transfers completed during the Year ended 31st March, 1913.

——	Number of Transfers.	Area.			Value of Improvements effected.			Consideration-money paid.		
Ordinary Crown lands—		A.	R.	P.	£	s.	d.	£	s.	d.
Occupation with right of purchase ..	32	18,783	0	11	27,312	3	0	56,142	15	0
Lease in perpetuity	32	8,795	1	10	25,784	7	0	53,312	0	0
Small grazing-runs	11	26,171	2	4	21,213	0	0	56,901	17	1
Perpetual lease	1	29	0	26	91	0	0	349	19	0
Pastoral runs	1	3,450	0	0	*			..		
Miscellaneous licenses	5	1,095	0	0	†			1,070	0	0
Totals	82	58,324	0	11	74,400	10	0	167,776	11	1
Land for settlements—										
Lease in perpetuity	39	11,059	1	17	27,168	15	9	45,086	12	0
Renewable lease	6	912	0	6	2,802	9	0	5,443	0	0
Small grazing-runs	1	1,213	0	0	1,781	18	0	‡1,200	0	0
Totals	46	13,184	1	23	31,753	2	9	51,729	12	0
National-endowment lands—										
Renewable lease	4	690	1	37	1,009	8	0	2,931	10	0
Education endowments	36	14,437	3	1	†			43,381	2	6
Grand totals	168	86,636	2	32	107,163	0	9	265,818	15	7

* Exchange of property. † No inspection required. ‡ One-fifth interest.

Besides the above, there were three transfers under the Land Settlement Finance Act, 1909.

LAND REVENUE.

The gross revenue received for the year was £121,153 11s. 6d., which is an increase of £4,538 18s. 3d. over the previous year.

The amount granted in rebates was £8,375 6s. 4d.

Ordinary revenue receipts numbering 3,823 and thirteen provisional-title receipts were passed through the Receiver of Land Revenue's cash-book. The amount received on account of survey liens was £1,889 3s. 10d., which is £1,049 5s. 8d. more than that received under this heading during the previous year. This entails a large amount of extra work in both the receiving and draughting branches. In the ordinary deposit accounts, the receipts were £18,764 6s. 10d., and disbursements £19,404 18s. 7d. These figures show a large increase on those of the previous years. The Local Bodies' Deposit Account receipts amounted to £9,001 2s. 7d.; and twenty payments, amounting to £8,195 14s. 3d., were made to the various local bodies. Out of the above revenue the sum of £35,260 was handled by the Gisborne office and transmitted to the Receiver at this office; this is an increase of £1,568 on last year.

EXPENDITURE OF "THIRDS," "FOURTHS," AND "HALVES."

After careful consideration of the twenty proposals for expenditure submitted by the local bodies, the sum of £8,195 14s. 3d. was approved by the Land Board, a satisfactory increase on last year's operations.

It is a matter of satisfaction to the Department that no complaints were received from the Crown tenants during the year, which goes to show that the amounts derived from their holdings and paid to the local bodies were spent to the best advantage—*i.e.*, in improving the road-access to their holdings. The amount at credit of the Deposit Account of the Receiver of Land Revenue at the end of the financial year was £6,751 6s. 6d.

LAND BOARD.

Meetings were held regularly every month at the district office and once a quarter at the local Land Office at Gisborne, and special meetings were held at Ormondville and Waipukurau in connection with land-ballots. The applicants greatly appreciated the saving of time and expense in holding the meetings of the Board so near the land offered for selection.

During the latter part of the year Mr. R. M. Birrell, the Gisborne member, resigned his seat, owing to his departure from the Dominion. Mr. George Wright, whose term as nominated member expired in March, was reappointed.

GENERAL REVIEW.

The year's transactions show that the work has doubled in this district since last year. In spite of the unfavourable season, owing to unsettled weather in the early part, followed by a dry spell for five or six months, and the burning of thousands of acres of grass, the district shows steady progress. The demand for land suitable for small farmers, chiefly dairying, is still unsatisfied, but with the experience of the Sherenden and Waihau Settlements, sheep-country is not so much in demand as the smaller areas of land suitable for dairying or mixed farming. The stringency of the money-market has made the payments of rents more difficult than usual.

DEPARTMENTAL.

The Accountant's branch also shows a large increase on last year's transactions; 888 vouchers were dealt with, representing an amount of £25,192. The number of letters, &c., received during the year was 13,171, and despatched 22,563. Out of the above, the following were dealt with by the Gisborne Branch Office: 159 vouchers were paid, totalling £1,251; and ninety-two vouchers, amounting to £5,968, were passed for payment by the Treasury; forty-one credit vouchers were passed, being cost of work done for other Departments, &c.

I wish to place on record my hearty appreciation of the work performed both by the office and field staffs during a very busy year, by which my labours have been much lightened.

ROBT. T. SADD,
Commissioner of Crown Lands.

TARANAKI.

SETTLEMENT OF CROWN LANDS.

An area of 23,866 acres of rural land was offered for selection during the year, in addition to 152 acres of Crown lands offered at auction and fourteen leases of education reserves. There were 112 new selectors, and they took up 25,858 acres. There are prespects of an exceedingly busy period during the new year, as an area of 105,280 acres is expected to be available for offering within the next few months.

CONDITION AND PROGRESS OF SETTLEMENT.

The district as a whole has recovered from the effects of the abnormal rain of the previous year, and, as a result, the progress and development has been encouraging, and from a farming standpoint the season was a successful one for both dairy farmers and graziers. Good burns were the rule all over the district, and this has encouraged the settlers to further efforts. The stringency of the money-market, lack of competent bushmen, and the high prices demanded for felling are, however, factors which are operating against the speedy clearing of bush lands. In the back country settlers are dairying on their easier country in places where a few years ago dairying would have been looked upon as impossible. Distance from a factory is also not quite the drawback which it has hitherto been since the adoption of home separating. There is no doubt that the home separator has enabled dairying to expand. There has been a very keen demand for young stock during the year, and buyers from as far away as the Bay of Plenty have found great trouble in securing stock in anything like the fair herds which they have been accustomed to pick up quickly. This would be some indication that there is a large local demand. In some parts of the district there was not sufficient stock available to eat off the feed. The class of homestead erected by settlers is a sure indication of the progress accomplished, and it has been very noticeable during the year that a class of house is being erected and looked upon as a necessity which not so long ago would have been considered a luxury. Many settlers are adopting the use of telephones, and in consequence are feeling less isolated and more closely in touch with the state of the markets.

Although the progress of settlement in the district has been exceedingly encouraging as a whole, it must not be overlooked that there is the ever-present drawback of want of good access. It is comparatively easy for those settlers blessed with good roads to make a success of their holdings, but people who have had no experience of the trials and tribulations of farming with at the best a 6 ft. track cannot realize what it really means to farm under such difficulties. There are settlers who for many years have been unable to get in provisions or transport their produce except per medium of pack-horses from and to the nearest dray-road. Quite apart from the ordinary votes for road-making, there is a very large sum paid yearly to the local bodies for expenditure on roads to the lands from which the moneys accrue, but as a rule this money is utilized for maintenance, and does not help to open up cart-roads at the rate to be desired. The settlers must have roads if they are to compete in the markets on anything like fair terms, and it is no exaggeration to say that the prosperity of the Dominion depends more on the adequate roading of the back country than on any other class of public work.

Improved-farm Settlements.

There are two recent settlements still in their infancy—viz., Mapara and Tangitu. The former has now reached the stage when it may be considered as successfully established. In both settlements the settlers were assisted by being granted, in addition to the usual financial aid, sufficient dairy-stock to give them a start. All the stock is apparently doing well with the exception of a few cases of tuberculosis, &c., here and there. The natural increase exceeds any loss there may have been. The Tangitu Settlement has not yet reached a thoroughly satisfactory condition. All the settlers have had good burns and the grass has taken well, so that there should be abundance of feed. But plenty of feed and thriving herds will not bring in a return unless the means of access is improved.

A start has been made on metalling the main road of access. A tram is being used for conveying metal, and this should allow work to go on with less hindrance from bad weather; but not a great deal has been done to the internal roads for the last twelve months, and some of the settlers have not yet got a 6 ft. track to their holdings. Improved-farm settlers, who usually have little or no capital, cannot succeed under such circumstances. If good access were provided now there would be a dairy factory in the block, and settlers would not have to pack their cream, in some cases, sixteen miles to the railway and then rail it to Te Kuiti, as a result of which it often arrives at its destination unfit for making into butter. In addition to the permanent advantage accruing from the improved road-access, the expenditure in the district of ready cash will help many settlers to tide over times of financial pressure, and, maybe, result in making them independent in future of outside work.

Taking into consideration the high cost of living, scarcity of work, financial stringency, and the want of good access, these settlers have done fairly well in their struggle against odds of which the city man knows nothing.

Revenue.

The revenue for the year amounted to £48,252, being an increase of £2,021 over that of the previous year.

Exclusive of the current half-year's rent, there were 119 settlers in arrear with rent, owing £1,086 12s. 9d. It has been found in dealing with arrears that there are grounds for thinking that some settlers could pay up to time without much effort, but delay doing so until they think the extreme latitude allowed is about exhausted. This class of settler would, if extreme care were not taken in discriminating, cause poorer neighbours considerable hardship; but by making exhaustive inquiries many of the defaulters who are really able to pay have been disclosed, and the arrears will correspondingly decrease.

Postponement of Payment of Rent.

The provisions for postponement of payment of rent have been largely availed of by the improved-farm settlers in the new settlements, very few ordinary settlers having made application under this heading. The amount postponed to date is £471 17s. 7d., owing by twenty-one selectors.

Freeholds.

The principal feature of interest under this heading is the alteration in the method of acquiring the freehold of lease-in-perpetuity ordinary lands and the extension of the right to land-for-settlement selectors. Since the coming into operation of the new Act there have been many inquiries for details in response to the circular memorandum issued, and up to the end of the year twelve selectors have taken advantage of the provisions of the Act.

TRANSFERS.

The Land Board approved of 197 transfers during the year. In dealing with applications of this nature the Board has determined to minimize aggregation as much as possible, so that it is now, except in extreme cases, not likely that consent will be given to transfers to persons who already hold sufficient land from which to make a comfortable living.

There is another aspect of transfers to which the Board's attention has been called. Applications have been received for transfers at a very high figure, and almost immediately after entry into possession the new selector appeals for time to pay rent. This state of affairs can be prevented by insisting upon proof of financial ability to carry on, and in future importance will be attached to the financial position of the proposed transferee, especially in cases where the consideration is a high one.

EDUCATION RESERVE LANDS.

In regard to the disposal of these lands, there have been very few transactions during the year, but there has been considerable correspondence in regard to renewals, transfers, mortgages, and other dealings. Out of a total of 382 lessees, only twenty-seven were in arrear, owing £176 14s.

LAND BOARD.

The Land Board this year altered the day of meeting from Tuesday to Thursday as being more convenient to the Department in the preparation of business. The Board held twelve meetings, all at New Plymouth, and did not make any tours during the year.

OFFICE-WORK.

The indoor staff has been kept very busy, and has maintained its reputation for loyal and cheerful attention to duty.

G. H. BULLARD,
Commissioner of Crown Lands.

WELLINGTON.

The total area of Crown land offered during the year was 9,979 acres. This, added to the land open for application on the 1st April, 1912 –viz., 735 acres—made a total of 10,714 acres available publicly for selection. The lands offered comprised principally portion of the North Waimarino Block near Kakahi; subdivisions of the Ngamatea Forest Reserve, near Karioi; part of the Piripiri Block, near Ashhurst; an extension of Ohakune Village Settlement, at the railway-station; and a number of forfeited sections in various survey districts. Cash sales by auction were held of an extension of Owhango Township and of lots in Pongaroa and Manunui Townships. Two lots offered in City of Wellington realized £4,820.

During the year effect has been given to the Board's former decision to increase the holdings of a number of settlers in the Mount Cerberus, Makuri, and Puketoi districts, and elsewhere, who were regarded as not having sufficient land for their maintenance. Twenty-two lots in those districts have been disposed of in this way, comprising a total area of 3,142 acres.

For a similar reason about 1,125 acres has been allotted to contiguous settlers in the Rangiwaea and Salisbury Blocks.

Timber on Section 42, Block XI, Ongo Survey District, and Sections 3 and 4, Block VII, Makotuku, was offered by auction, the result in the latter case being very successful, inasmuch as a milling bush offered at an upset price of £7,478 realized £8,500.

In addition to this, sawmill licenses have been granted over an area of about 1,880 acres, at a total royalty of £7,842, and on behalf of improved-farm occupiers over an area of about 1,397 acres, royalty being payable on output of mills.

The lands taken up during the year on all tenures comprise 14,299 acres, in 168 lots.

LANDS TO BE OPENED.

Steps are now being taken to place 64,899 acres, comprising the following lands, in the market during the ensuing season, and the surveys of many of them are already well advanced: Whakaihuwaka Block, near Waitotara, 8,923 acres; subdivisions of recently resumed runs near Alfredton, 1,980 acres; Hurupi Block and portion of adjoining Haurangi Forest Reserve, about 16,035 acres; portion of forest reserve near Manawatau Gorge, 4,325 acres; Mangatainoka Block, near Pahiatua, 1,830 acres; Kaiwakauka (South Waimarino) Block, about 10,000 acres; three pastoral leases, Raketapauma and Motukawa Blocks, 4,184 acres; seven lots in Puketoi and Mount Cerberus districts, 1,189 acres; about 1,536 acres (Duncan's exchange) on the Turakina River, in Mangawhero Survey District; also 9,240 acres of settlement land near Masterton and Aorangi, 3B 3C, Te Kawau Survey District, 240 acres. Included in the above total is an area of 5,417 acres in the Waipapa Valley Block (South Waimarino), which was offered late during 1912–13 on optional system, but withdrawn. It has been readvertised for sale since the close of the financial year, and the greater portion selected. The returns will appear in the transactions for 1913–14.

In connection with the preparation of the above-mentioned lands for the market I desire to draw your attention to the many unusual obstacles that have delayed earlier dealing with them.

The Whakaihuwaka Block had to await a decision of the Native Land Court relative to the adjustment of some of the boundaries, and was also complicated with portions of national-endowment land included in several of the subdivisions.

The Hurupi Block required two roads to be taken through Native and European land before it had any access.

The Haurangi Block is still State forest, from which the reservation has to be removed.

The Waimarino Block required much exploration for roads and access through Native land. We are also seeking to adjust the Native boundary of it on reasonable lines.

A road has to be taken through private property to the Aorangi Block.

The 1,536 acres on the Turakina River was only made available after a most tedious series of exchanges.

The Mangatainoka Block was encumbered with leases, and requires a road through Native land, and the block in the Manawatu Gorge is still forest reserve.

IMPROVED-FARM SETTLEMENT LANDS.

The steward of the North Waimarino Improved-farm Settlement reports that perhaps the most pleasing feature of this year's progress is the value of the improvements effected by the settlers, independently of those paid for by State advances, which he estimates at £12,810. This speaks well for the energy of the tenants and their determination to succeed.

This season a new departure was made. Many of the settlers being without the means to stock their holdings, the Government provided them with 250 extra cattle on favourable terms of payment, the number of stock on the settlement now being 1,214. This number consists mainly of heifers that will come into profit next season. A dairy factory, recently established at Piriaka, will greatly further the dairy industry in this district. Sixty-six settlers are residing on their holdings, the total population of the settlement being 422 souls. Fourteen selectors cannot go on to their holdings until the milling-timber has been removed.

Ten sawmills have cutting-rights in the settlement, and at these some three hundred men are employed, who, with their families, help to swell the population of the small townships along the Main Trunk line. Amongst them, these mills put out close upon 100,000 ft. of timber daily.

The settlers are, on the whole, a very good class, the non-success of a few being due to their having been in financial distress before they entered into occupation.

RANGERS' INSPECTIONS AND REPORTS.

The Crown Lands Rangers in the west coast division made 723 inspections during the year, covering an area of 161,965 acres. In addition to these, Ranger Craig claims twelve inspections, of an area of 8,411 acres, in connection with blackberry on the Tongoio Estate, Hawke's Bay.

On the holdings inspected, the value of the improvements required to be effected by the tenants was £12,995; the value actually made was £38,464—*i.e.*, £25,469 in excess of requirements.

In the east coast division the Rangers made 727 inspections, over an area of 232,709 acres. On this side of the district, too, the tenants have shown a desire to have their holdings highly improved, and they have put on improvements to the value of £105,366 over and above what was required by the conditions of their leases. The requirements were £61,091, and the improvements actually effected were valued at £166,457.

PROGRESS OF SETTLEMENT.

The Crown Lands Ranger for the northern portion of the west coast division reports that settlement in his district is progressing in a satisfactory manner, and the settlers have enjoyed a most favourable season. Large areas of bush, some of which was felled last year, but not burned owing to unfavourable weather, have now been burnt, and good clear burns are to be seen everywhere, and the new grass is coming away well.

The mortality amongst stock has been much less this year than last.

In the Waimarino Block good progress continues to be made. Most of the settlers have now roads of some kind to their sections, but much requires to be done before many have proper access and can get their stock in and out without much labour.

In the Rangitatau Block the settlers are doing well, and large areas of bush have been felled on most of the sections this year. The road up the Waitotara Valley is now well advanced, and a stock-bridge has been built over the Waitotara River for the convenience of the settlers in the upper part of the block.

In the Te Tuhi and Ahu Ahu Blocks good progress has also been made. Several sections have changed hands, but good settlers have taken the places of those who sold out. The main road through the block has been widened into a dray-road for some miles, the settlers having raised a loan for this purpose. The County Council has, however, experienced great difficulty in letting contracts. The road along the right bank of the Wanganui, known as the "Missing Link," has been taken, and formation is now well in hand. This road will be a great boon to settlers.

The village settlements along the North Island Main Trunk Railway continues to make marked progress. Several new sawmills have begun operations, and work is consequently plentiful.

The Crown Lands Ranger for the central district from Palmerston North northwards reports that the Crown tenants in his district have experienced a very favourable year. Splendid prices ruled for wool, and, although the clip was light, the quality was excellent.

The price of stock fell during the slaughtermen's strike, but the drop was only temporary, and good prices are now being realized. In most cases the settlers had good burns, but, owing to the dry autumn, in exposed ridges, &c., the grass did not come away very well. The past winter was very wet, and the roads and bush tracks were often blocked by slips. The local bodies, however, soon removed the obstructions, and it was only in a few cases that settlers suffered any prolonged inconvenience.

The Crown Lands Ranger for the eastern portion of the district reports that settlement still continues to make steady progress throughout the district, and the settlers generally seem prosperous and contented. Some few are now taking advantage of being able to convert their holdings into freeholds.

The season just passed has been a good year for all classes of farm produce, and settlers have benefited thereby.

The major portion of the lands selected in this portion of the district have now been held for a number of years, and the conditions have been fully complied with, the improvements being largely in excess of requirements. Still, selectors continue to add to them each year with new homesteads, stumping and cultivating where there are suitable areas, thereby increasing their carrying-capacity and returns. The dairy industry still continues to flourish, and is one of the principal industries of the district, as every year sees new cheese or butter factories established.

The access to and through the various settlements steadily improves, full-width dray-roads taking the place of 6 ft. tracks; also numerous bridges have been erected over the more dangerous streams—a great boon to settlers.

The Crown Lands Ranger for the south-eastern and southern portions of the district reports that settlement in this part of the land district has prospered along the usual lines. Settlers go in for dairying wherever their holdings are suitable for that purpose; prices ruling for dairy-produce were, however, lower than those obtained last year. The settlers who carry on sheep-farming have had a very successful season.

In the eastern portion of this district the Crown tenants hold chiefly under land-for-settlement conditions. The settlements are now well established, and where they consist of farming land the settlers are doing well. This is very popular, and a good number of prospective settlers would gladly take up agricultural farms if such were available at a reasonable price.

In the western portion the bulk of the tenants hold on village-settlement conditions. These settlements are now well established, and generally all the conditions have been complied with.

Roads for the most part are in good order. Some tracks still require widening into dray-roads, these being principally in the Wainuioru Survey District.

In travelling through the district and conversing with the settlers the Ranger heard no complaints.

TRANSFERS.

During the year under review 184 transfers were completed on ordinary Crown lands, the area transferred being 43,265 acres. On settlement lands twenty-one transfers were registered, representing 5,151 acres; and twenty-four education leases, aggregating 5,812 acres, were transferred. The figures are made up as follows:—

	No.	Area.		
		A.	R.	P.
Ordinary Crown lands—				
Occupation with right of purchase	45	19,843	3	11
Lease in perpetuity	92	12,665	1	29
Renewable lease	26	335	2	16
Small grazing-run	10	10,326	1	0
Pastoral licenses	2	56	0	38
Miscellaneous	9	37	2	31
	184	43,265	0	5
Land for settlements—				
Lease in perpetuity	17	4,493	2	8
Renewable lease	3	655	1	18
Miscellaneous	1	2	1	0
	21	5,151	0	26
Education leases	24	5,812	1	39

FORFEITURES AND SURRENDERS.

The number of forfeitures during the year was thirty-nine under all tenures, the area forfeited being 3,858 acres. These figures disclose a material increase in number over last year's statistics, the number last year being eighteen.

Six leases, comprising an area of 4,121 acres, were surrendered during the year, included in which were two primary-education reserve leases, of an area of 593 acres.

The annual rental involved in both the forfeitures and the surrenders was £604 8s. 8d.

CONVERSIONS OF TENURE.

Only one conversion of tenure is recorded during the year. This was the conversion of a lease held under village-homestead special-settlement conditions to a renewable lease. The settler thus secures the advantage of a lower rental, but loses the right to acquire the freehold. The area brought under the new tenure is 6 acres, and this area automatically passes into the national endowment.

Conversions of Leases in Perpetuity into Freeholds under Part II of the Land Laws Amendment Act, 1912.

Since the passing of the Land Laws Amendment Act, 1912, in November last, sixty-six selectors have given notice under Part II of the Act of intention to purchase the freeholds of the lands comprised in their leases, the total area affected being 9,052 acres 1 rood 32 perches, and the total price, £10,462 15s. 1d. Of these, twenty-three holdings, comprising an area of 3,963 acres 2 roods 31 perches, have actually been made freehold, at a total price of £3,385 0s. 4d. Of those who have given notice, five elected to purchase by deferred payments and sixty-one for cash. Of the sixty-six applications received, forty-two of them are to purchase small areas ranging from 1 rood to 26 acres.

Conversions to Freehold of Renewable Leases taken up under the Land for Settlements Act, 1908, in terms of Section 59 of the Land Laws Amendment Act, 1912.

Only one selector has given notice of his intention to purchase the freehold of his holding. He holds two leases, comprising 17 acres 3 roods 13 perches. The present price is the same as the original valuation—viz., £135. Selector has elected to purchase by deferred payments, but he has not yet paid his first instalment.

LAND BOARD MEETINGS.

During the year twelve ordinary and four special meetings of the Land Board were held. The special meetings were held in connection with opening of new blocks. Five of the ordinary meetings extended over two days, on account of the large number of matters coming up for discussion.

REBATES OF RENT.

For prompt payment of rent, rebates amounting to £2,896 1s. 4d. were granted to 2,344 tenants on ordinary Crown lands, £1,584 6s. 7d. to 347 tenants on settlement lands, and £70 10s. 3d. to twenty-eight tenants on national-endowment lands.

ARREARS OF RENTAL.

On ordinary Crown lands 129 tenants were £3,846 8s. 5d. in arrear with their rent, exclusive of the current half-yearly instalment. Including the current half-yearly instalment, the arrears under this heading were £6,922 17s. 10d. due by 328 tenants.

On land-for-settlements estates, excluding current instalment, sixteen tenants were £339 10s. 6d. in arrear. Including current instalment, thirty tenants owed arrears amounting to £854 7s. 7d.

On national-endowment areas, arrears amounted to £256 0s. 9d. due by three tenants, exclusive of current instalment; and £492 9s. 2d. due by eleven tenants, inclusive of current instalment.

On education endowments twenty-two settlers were £224 2s. 4d. in arrear with two or more payments, while, including the current instalment, £863 12s. 10d. was owing by eighty-two tenants.

The gross arrears—viz., £9,133 7s. 5d.—include an amount of £3,850 16s. owing by settlers in the Kaitieke and Retaruke districts, who have not been pressed for payment.

OFFICE OF THE RECEIVER OF LAND REVENUE.

In the Receiver's office, 8,070 ordinary revenue receipts and ninety-three provisional titles were issued, governing a gross revenue of £111,098 11s. 7d. In the Deposit Account, 879 receipts, for the sum of £16,080 6s. 9d., and 164 cheques, representing 1,416 disbursements, were issued. The sum of £5,967 18s. 4d. was paid into the Local Bodies' Deposit Account, and the sum of £10,224 19s. 10d. was paid to twenty-six local bodies.

CLERICAL.

The number of letters received during the year was 18,902, and the number despatched was 39,413. These latter comprise letters, telegrams, circulars, plans, lithos, rent notices, &c. The total correspondence thus dealt with was 58,315. There were 821 cheques covering 742 vouchers drawn on Imprest Account for the total sum of £8,633 0s. 11d. Other accounts dealt with covered 614 vouchers for £27,855 17s. 3d., and there were twelve requisitions for imprest money, representing £8,650 made during the year.

CHANGES IN CLERICAL STAFF.

After forty years' continuous service in this office, Mr. G. R. N. Wright, Chief Clerk and Secretary to the Land Board, elected to retire on superannuation last September. The retirement of such an experienced and capable officer was naturally a great loss to the Department and to me, who had only recently been appointed Commissioner here. He carries with him into his retirement the well-earned esteem and good wishes of all his fellow-officers. His place was taken by Mr. H. M. Bannister, late Chief Clerk and Secretary to the Land Board of the Taranaki District, who is also a very experienced officer.

In conclusion, I have much pleasure in advising you of the efficient and cheerful co-operation I have received from all the officers since my transfer to this district.

T. N. BRODRICK,
Commissioner of Crown Lands.

NELSON.

Condition and Progress of Settlement.

The settlement of this district has progressed satisfactorily during the past year, and now, since the practice has been generally adopted of not opening lands for selection until they are roaded, there are not so many complaints of want of roads.

Owing to the increase of the field staff and to the fact that several contract surveyors have been engaged on applications, chiefly on the West Coast, the arrears of these surveys, which have for several years been large, have now been reduced to within reasonable limits.

Taken all round, the settlers in this district are a very good class, and seem generally contented with their lot and their future prospects.

The roading of the backblocks is being carried out in a very satisfactory manner under the Public Works Department and the various local bodies, with the money at their disposal, but much remains to be done.

The opening of the railway to Glenhope has greatly encouraged the settlers in the vicinity of Murchison by the reduction of freight, and by bringing them nearer to civilization.

An extension of the line to Owen Junction is now under construction, and when this is completed it will bring Murchison within 11½ miles of the terminus. This is a very thriving township, the centre of a large pastoral district, parts of which are well adapted for dairying, and the butter-factory is well patronized and is a large factor in the prosperity of the place.

Land proposed to be offered in 1913–14.

The following blocks of Crown lands now either under survey or shortly to be put in hand will be offered for selection next year:—

The Howard Block, consisting of some 20,000 acres already surveyed and partly roaded, within ten miles of the railway at Glenhope. The land is suitable for pastoral purposes, and will be put on the market on the completion of certain exchanges with an adjoining freeholder.

The Waimea Block, of 10,000 acres of pastoral country, within ten miles of Hope Railway-station and twenty miles of Nelson City.

The Gowan Block, of 6,000 acres, adjoining the Howard Block and near the picturesque Lake Rotoroa.

The Lamb Valley Block, of 6,000 acres (the survey of which is completed), which is within a mile of Glenhope Railway-station.

The Station Creek Block, of 4,000 acres, adjoining the previous block.

The Matiri-Owen Block, of 8,000 acres, on the right-hand branch of the Owen River.

The Mokihinui Block, of 5,000 acres, at the forks of the Mokihinui River.

There are also some 4,000 acres in the Oparara district, and a similar area in the Waitakere district, that it is hoped to offer during the year.

Inspections by Crown Lands Rangers.

During the year the three Rangers in this district made 697 inspections of leases held by Crown tenants under the several tenures, besides innumerable other inspections and reports, &c. The improvements required amounted to £64,675, whereas those actually made totalled £132,758—more than double the requirements of the Act. The defaulters numbered seventy-three for deficient improvements only, ninety-six for non-residence only, and forty-eight for both. In the Buller and Inangahua Counties the Rangers have to undertake a large amount of work for the Wardens in connection with mining privileges, &c. Altogether the Crown tenants felled 11,800 acres of bush during the year, mostly on the West Coast, where, owing to a wet season, there have not been many satisfactory burns.

Tenures.

The bulk of the lands selected during the year were either on renewable lease or pastoral license, as most of the land offered was either in the national-endowment area or in a mining district.

Arrears of Rent.

Apart from the endowment lands and primary and secondary education, the arrears amount to £2,492 12s. 5d. The largest item is £792 16s., on Braeburn Settlement. It was not considered advisable to unduly press these settlers for their rent, as they have had a hard struggle, and their improvements constitute good security for their indebtedness, and settlement has to be pursued under considerable disadvantages. The arrears of ordinary endowment amount to £4,569 14s. 11d., mostly on coal leases. This revenue belongs to the Westport Harbour Board, who have allowed one large coal company a considerable amount of latitude in the matter of payment, owing to unforeseen circumstances and labour troubles.

Education Endowments.

Since the above have been administered by this Department everything in connection therewith has been running smoothly, and calls for no special remarks. The arrears of rent are not unduly large.

The Flax Industry.

This industry is only in a very small way in this district, as the flax does not grow in sufficient quantities in any one locality to make milling profitable at the present fluctuating price of fibre.

THE FRUIT INDUSTRY.

This industry is year by year assuming larger proportions in the northern part of the district, and the demand for land for apple-culture continues unabated. The value of this business to the district is enhanced by the fact that hundreds of acres of lands hitherto considered worthless have proved eminently adapted to apple-culture. The Home markets and those of South America are being exploited, and the fruit is coming into such favour and repute that the future of the industry seems assured. Peaches, nectarines, and small fruit are grown to a considerable extent, especially in Motueka and the Waimeas, where there are six canning and preserving factories, all working at high pressure during the season in order to cope with the fruit coming in.

THE DAIRY INDUSTRY.

This important industry is growing fast, and is proving a valuable adjunct to the small farmer, and the number of butter and cheese factories is steadily increasing. One or other of these factories is now established at Takaka, Collingwood, Brightwater, Murchison, Purumahoe, Richmond, Karamea, Birchfield, Charleston, and Cronadun, thus being well distributed over the district.

THE COAL INDUSTRY.

The vicinity of Westport, in the Buller County, is the most productive part of Nelson District with regard to coal, the output for last year being 848,200 tons. There are also some small mines working near Reefton, the total output from which was only 8,357 tons, all consumed locally, a considerable decrease on the previous year's figures, owing to labour troubles. Near Collingwood there are two companies in active operation—the North Cape and Puponga—both supplying considerable quantities of coal, which is in very good repute for household purposes. There is also another mine with excellent prospects being developed near Ferntown. In the Collingwood district, also, the industry was greatly hampered during the year by labour troubles.

THE LAND BOARD.

The usual monthly meetings were held in Nelson, and special meetings at Westport and Reefton. During the year Mr. J. S. Wratt, who had served many years on the Board, died somewhat suddenly at Motueka. On account of his ability and long experience, his loss will be greatly felt by the Board. Mr. Andrew Sinclair was appointed in his place.

CHANGE OF STAFF.

I desire to place on record my appreciation of the long and faithful and zealous services of Crown Lands Ranger Mr. Frank Ward, who retired on superannuation in June last.

DEPARTMENTAL.

Owing to a variety of causes the office-work has been exceedingly heavy, and it has only been with the greatest difficulty that absolutely necessary current work could be coped with. There are now 2,625 Crown tenants, and the number of letters, telegrams, &c., despatched and received was 26,960. 934 vouchers, representing £22,221 6s. 11d., passed through the books.

I have to thank the staff, both office and field, who, with a few exceptions, have co-operated with me most heartily.

F. A. THOMPSON,
Commissioner of Crown Lands.

MARLBOROUGH.

LAND OPENED FOR SALE OR SELECTION.

The total area of Crown land opened for sale or selection during the year was 11,736 acres, a considerable falling-off from the previous year. The principal block, containing about 10,000 acres (opened in March), is situated in the Upper Pelorus Valley, and being rather rough and of poor quality, only four sections, containing 3,441 acres, have so far been taken up.

OPERATIONS DURING THE COMING YEAR.

The only block of ordinary Crown land of any dimensions likely to be opened during the year is situated in the Opouri Valley, in the Wakamarina and Tennyson Survey Districts. This land (approximately 4,000 acres) contained the finest timber in the district, and Messrs. Brownlee and Co. (sawmillers) expect to finish cutting early next autumn. The valley contains a considerable extent of alluvial flats, and with the adjoining hill country should cut up into a number of dairy farms, as it is close to the Flat Creek Dairy Factory. The block will be easily roaded, and is handy of access to the main Nelson–Blenheim coach-road.

RANGERS' REPORTS AND PROGRESS OF SETTLEMENT.

From the nature of the reports received from the Rangers it is evident that the Crown tenants have, generally speaking, had a good year. The exceptionally dry summer enabled the settlers to obtain good burns over the old as well as the newly fallen clearings, and greatly facilitated the clearing-up of rubbish preparatory to resowing. These benefits have been discounted somewhat by the dryness of pasture towards the end of the season, and the consequent shortness of feed not only for late summer, but winter feeding. This shortage has affected the dairy-factory supplies of North Marlborough, and the quantity of milk coming forward has fallen below the average. There has been an all-round increase in the dairying output, and the season has been a successful one. A large number of farmers in the vicinity of Blenheim, and as far south as Ward, forward their cream to Wellington by river boat for manufacture into butter. The growing of lucerne in the dry and stony areas of Marlborough promises to bring into use a large extent of land hitherto considered useless for the purposes of dairying. Those engaged in grain-growing have had excellent results, and the returns from wool have been highly satisfactory. The unfortunate strike of slaughtermen, and the impossibility of quitting their lambs at the proper time has been a serious blow to many of our grazing tenants.

The improvements carried out by Crown tenants again show a large increase over the amount required by the Land Act. The number of holdings inspected by the Rangers (exclusive of land-for-settlement holdings) was 179, over an area of 200,081 acres, the improvements required by the Act being £48,144, and actually carried out £119,968. The arrears of rent at 31st March amounted to £953 16s. 8d.; of this sum a considerable proportion has since been received.

FLAX INDUSTRY.

The high price of flax has caused a revival in this industry, and nearly all the mills are again at work, some of them working night shifts. A large number of unskilled labourers are employed in the cutting, carting, &c., of the raw material. Great difficulty is experienced in obtaining suitable labour for this work, and one or two of the mills are closing down on this account. Under contract, men have been known to make over £20 a month at flax-cutting, and yet there is a shortage.

LEASE IN PERPETUITY MADE FREEHOLD UNDER THE PROVISIONS OF THE LAND LAWS AMENDMENT ACT, 1912.

Only three applications have so far been received for the conversion of lease-in-perpetuity holdings into freehold, in each case representing only small areas.

REBATES OF RENT.

For prompt payment of rent, rebates amounting to £2,253 5s. 6d. were granted to 726 tenants made up of £1,853 17s. 1d. on land-for-settlements holdings, and £399 8s. 5d. to tenants on ordinary Crown lands and national-endowment lands.

CLIMATIC RESERVES.

With regard to climatic reserves, or land set aside for the growth and preservation of timber, I beg to state that a very considerable area, amounting to 21,000 acres, has during the year been permanently reserved by Proclamation for this purpose. These areas are made up almost entirely of the upper slopes and peaks of the bush-clad ranges throughout the Sounds and Port Underwood districts. The most prominent features of these reservations are: Mount Stokes, or Pororangu (3,951 ft.), which dominates the whole seaward or Cook Strait front of the Sounds County; and Mount Robertson, or Tokomaru (3,397 ft.), on the Picton - Port Underwood watershed. Further additions to this class of reserves will, I hope, be made soon along the mountain backbone that constitutes the watershed of the Wairau–Pelorus valleys. I quite anticipate that fires will from time to time during the drier seasons damage these fine reservations, but their areas are now sufficiently large, and the climatic conditions favourable, to their recovering and renewing themselves with young growth. On no consideration should resumption be permitted over such burnt-out areas and the land allowed to be taken up by the adjoining holders, for the reason that such a course would probably lead to the wilful destruction of tracts of reserved bush. With the exception of the fire that swept over the Rai Saddle reservation, Mount Duppa Range, in February last, little damage, I am pleased to say, has been suffered during the year from this source by the large area of climatic reserves throughout the district.

DEPARTMENTAL.

The Land Board held twelve ordinary meetings, and one special meeting in January in the Pelorus Valley in connection with applications for timber licenses. The third biennial election for a representative of the Crown tenants on the Board was held on the 16th December, 1912, resulting in the return of the sitting member—Mr. James Fulton—by a large majority. Fifty per cent. only of the tenants availed themselves of the opportunity to record their votes, from which it may be inferred that the privilege is not greatly valued by many of the leaseholders. Mr. H. M. Reader, one of the nominated members, whose seat has been filled by Mr. J. S. Storey, has sat continuously for ten years, and I would like to express my appreciation of the energy and ability he has thrown into the work of the Board during his term of office.

I have to express my thanks to the Chief Clerk and other members of the staff for the able and ready assistance accorded me during the past year.

W. H. SKINNER,
Commissioner of Crown Lands.

WESTLAND.

As an agricultural district Westland is as yet in a somewhat undeveloped state, due to the fact that until recent years attention was almost wholly devoted to the development of the mining resources. The first stages of transition from mining to agriculture must of necessity be slow, as, for the reasonable protection of the miner until such time as the land has been thoroughly tested, tenures of sufficient permanency to warrant settlers investing the capital necessary to bring the land to a reproductive state cannot be granted. It is, however, essential that lands be not withheld from lease for any unreasonable length of time after active mining operations have ceased, as the interval of inactivity seriously retards the progress of the district. The withholding from selection of lands that have not within recent years been worked in view of the possibility that minerals may at a later date be found in the deeper levels is not justified, as in the meantime the surface soil could be turned to profit, and the fact of his being required to compensate the farmer for the clearing of the land would not deter the miner from working the ground, provided that a reasonable basis for assessment of the compensation were provided. From an agricultural point of view, Westland has suffered somewhat severely in the past on account of the absence of a tenure that would satisfactorily solve the difficulty as between miner and settler. Regulations have, however, now been issued which, while offering security of tenure to the settler, reduce the liability of the miner to such an extent that it should be possible to lease all lands not actually covered by mining licenses.

On account of the moistness of the climate and the uncertainty of the seasons, the district is not adapted to agricultural farming, but in the matter of dairying and grazing, prospects of a very useful future are decidedly promising. The suitability of the lands for dairying is now being recognized, and those factories at present operating are producing very gratifying returns. A new factory has been established at Kumara during the year, and three new co-operative dairy-factory associations have also been formed. The establishment of dairy factories is resulting in increasing land-values, but competent judges aver that ruling prices are lower than those for similar classes of land in any other district. This is no doubt due to some extent to the isolation of the district, but also largely to the fact that the possibilities of the land for dairying and pastoral purposes are not generally known. The settlers almost wholly depend merely upon rough clearing and surface-sown grass, and while values are low they can thus obtain a fair return for their outlay; but with the advent of scientific farming, the productive value will be largely increased, and enhanced prices will be demanded. Inquiries from other parts of the Dominion, more especially for cattle runs, are fairly numerous. There is at present a considerable area of land notified in the Crown Lands Guide open for selection, but practically the whole is situated in the southern part of the district, which is as yet in an undeveloped state, and somewhat sparsely populated. The sections are generally bush-covered, and when cleared and grassed would be suitable for dairying purposes; but as there are at present no dairy factories in existence further south than Wataroa, some sixty-two miles from Hokitika, there is no inducement for men with small means to acquire the sections, as the only purpose for which they could be used at present is for rearing and fattening cattle, and for these purposes large areas and considerable capital are required. Several blocks of land in the northern district are at present being subdivided for settlement under the special regulations recently issued.

A splendid crop of grass has been recorded in all parts of the district during the past year, and the supply of milk to the factories has been well maintained. The wet season has, however, been somewhat unfavourable for getting new areas under grass on account of the difficulty in getting a satisfactory burn. A considerable area of bush has been felled, and in the case of those settlers who were fortunate enough to strike favourable weather-conditions, the new grass and green crops have proved very satisfactory. The hay-crops were generally a failure. The settlers as a whole are very well satisfied with the year's returns, and good progress is being made generally.

Unfortunately the warm rains at the close of the year produced very severe floods in a number of the rivers, and somewhat serious damage resulted to roads and bridges, while the holdings of settlers in some localities suffered considerably. The greatest damage occurred at inter-Wanganui, where the Wanganui River cut a new channel through a valuable dairying district. The actual losses in lands and stock did not amount to any very considerable sum, but the prospective damage to property and consequent decline in values that will result unless the water is prevented from flowing in the new channel is a very serious matter. However, temporary protective works have already been effected, and the promise of financial assistance from the Government in the erection of a permanent stop-bank has saved the situation, as the settlers in the locality feel that the safety of their holdings from further damage is assured.

On account of the improvement in the flax-market the whole of the flax-mills in the district, which have been closed down for the past two years, have recommenced operations.

The whole of the sawmills were in active operation during practically the whole of the year, and a total of approximately 54,286,300 ft. of timber was cut, but the market at present, especially for white-pine, is somewhat dull, and cutting operations are consequently restricted.

In the matter of the eradication of noxious weeds, operations on Crown lands have been confined to ragwort and Californian thistle, which have been systematically cleared; but it is very necessary that action should also be taken to deal with blackberry, which is a very serious menace to the agricultural future of the district. The eradication will involve the expenditure of a very large sum of money, but it is a matter that demands early attention. It is impracticable to obtain any satisfactory and permanent results by cutting and grubbing, as a very large proportion of the infested areas comprises mining tailings from which the roots cannot be removed at a reasonable cost, but up to the present no other satisfactory method of eradicating this pest has been discovered. Fair results have at times been obtained by spraying with a solution of arsenic and caustic soda, but this is effective only in dry climates. The expenditure of a sum of money in conducting experiments to discover the most practicable and effectual method of eradicating blackberry would be amply justified, and I would strongly recommend that this course be adopted.

At the date on which the administration of education-endowment reserves was vested in the Land Board, practically the whole of the area reserved was held under leases which are still current. The reserves include an area of some 7,000 acres of land carrying sawmilling timber, the right to cut which has already been granted, and, as a large proportion of this area is situated in the southern portion of the district, it is improbable that the timber will be cut out for some years. In the meantime the land cannot be dealt with for agricultural purposes, as the destruction of a large amount of valuable sawmilling timber would result.

The operations of the past year have been very satisfactory both in the matter of the increase in settlement and the revenue received, and the prospects for the coming year are very promising.

During the year a vacancy occurred on the Land Board owing to the resignation of Mr. M. J. Pollock, to whom the district is indebted for ten years of useful and attentive service.

My thanks are due to the office staff for the capable manner in which they have performed the various duties allotted to them. I would especially mention Mr. Sandford, Chief Clerk, for the very efficient manner in which he has carried on the work of the office during my absence on the Forestry Commission.

H. D. M. Haszard,
Commissioner of Crown Lands.

CANTERBURY.

Lands offered for Disposal.

During the past financial year there has been great activity, and the officers of the Land Board have been very fully employed in the disposal of fourteen new settlements, situated mostly in South Canterbury, under the Land for Settlements Act, comprising 95,853 acres. Further particulars are given in separate report.

In the Hororata and Rangiora Survey Districts there were 63 acres sold at auction at the price of £377.

In the Cheviot Estate 634 acres were disposed of in twelve lots, under renewable lease, by ballot. The pastoral run adjoining the big bush at Kowai, in the Selwyn County, comprising 6,600 acres, was offered at auction, and was disposed of at the upset price. Another pastoral run was let for the first time in the Waipara County, containing 445 acres, the upset rental being £112 per annum, and was disposed of at an annual rental of £155. The license of a pastoral run at Lake Coleridge fell in, and was reoffered as two small grazing-runs, forty-five applicants being admitted to the ballots.

Land Revenue, Payment of Rents, Arrears, and Rebates.

The total revenue for the past year amounted to £202,256 13s. 11d., being an increase of £29,685 18s. 1d. over the previous year. This is due to the great increase of lands selected under the Land for Settlements Act. The total amount of rent in arrears at the 31st March, 1912, exclusive of current payments, was £6,462 2s. 3d., or 3 per cent. on the annual rent-roll. The total sum allowed for rebates for prompt payment of rent was £10,433 8s. 7d., the number of tenants who participated in this privilege being 2,391.

Freehold.

Four holders of leases in perpetuity, comprising 364 acres 1 rood 12 perches of Crown land, to the value of £704 14s. 11d., have applied to acquire freehold under the provisions of the Land Laws Amendment Act, 1912; and one holder of renewable lease of settlement land has also taken advantage of the opportunity to apply for the purchase of the freehold under the legislation of last session. All these transactions have not yet been completed.

Forfeitures and Surrenders.

Twelve transactions of "Lands-for-settlement Lands" came under this heading, comprising an area of 1,728 acres 2 roods 13 perches, mostly due to applicants selecting land in the new settlements without previously inspecting it, and then refusing to sign the lease. The figures this year show a reduction of eight in comparison with last year.

Rangers' Reports and Condition of Settlements.

The settlements in the whole of the district, with very few exceptions, are in a highly prosperous and flourishing condition; the exceptions are the later settlements, owing to the partial failure of the grain crops and the smallness of some of the areas.

A noticeable feature of the land-ballots held during the year was the preference by applicants for pastoral instead of agricultural lands. The season of 1912 was one of the worst experienced for some years by the North Canterbury pastoral-run holders, the percentage of losses in stock being very much greater than usual owing to the severe winter and heavy falls of snow, which also considerably reduced the lambing percentages. The high prices now ruling for all classes of sheep places these holders at a considerable disadvantage in replacing their depleted flocks. Eight of these licensees have applied for relief under the provisions of section 27 of the Land Laws Amendment Act, 1912, for an extension of their licenses.

The area under the Land for Settlements Act in North Canterbury and the older settlements in the other parts of the district are in a very satisfactory condition. Although the grain-crops returns for the past year have not been as good as previously, the yield would have been well up to the average of other years had it not been for the unusual number of north-west winds that prevailed just before harvesting, the grain ripening before it came to maturity, thereby reducing the yield per acre. Other crops have produced good returns, and as the prices obtained for wool, mutton, and all other produce are well above the average of other years, these tenants, on the whole, have had a prosperous year. A noticeable feature with these lands that have been selected a few years ago is the increasing goodwills that are paid by the incoming tenants, proving that these lands have been a good investment for the original selectors.

The licensees of the pastoral runs situated in the Mackenzie, Ashley, and Amuri Counties disposed of in February, 1911, took possession in February of last year, and are now due for inspection.

The lessees of the four small grazing-runs which were disposed of in the Mackenzie County last year, covering an area of 77,780 acres, have effected £3,886 worth of improvements in excess of requirements. The improvements are all of a substantial character, and the settlers are in good heart.

Crown Lands, Ordinary.

There have been only a few small blocks of land available for small holdings for some years past. The older settlements are thoroughly well established, and are satisfactory in every way. The tenants' interests in the value of their holdings exceeds in most cases that of the Crown, goodwills in some cases placing the original selectors in a position of affluence. Some of the light lands in the Oxford and Ashburton districts, by means of careful husbandry, now produce satisfactory crops of rye, oats, and turnips. The lands on the margin of Lake Ellesmere have experienced a period of immunity from damage by overflow of lake-water, and have profited accordingly. There is now very little which requires special mention, except that it may be possible to further subdivide some of the front pastoral country at the expiration of the present leases when the opportunity of attaching the lesser subdivisions to small areas of acquired lands for the purpose of providing disconnected homesteads is taken advantage of.

The education reserves are generally in fair order, although the insecurity of the present leases is not conducive to keep the improvements in first-class condition; but as the leases fall in the new leases to be issued by the Department will give the settlers a better tenure, and we may look for some substantial improvements, and for the reserves being brought into better condition. Four education leases, paying £321 per annum, which expired during the year, were renewed at £482 per annum, being an increased rental of £161.

Lands to be opened in the coming Year.

Fourteen hundred acres of Crown land in the worked-out Oxford Bush will be offered shortly under the optional system in six sections, varying from 200 to 300 acres, and from present indications will be keenly sought for. Two pastoral runs, comprising an area of 14,300 acres, in the Ashburton district will also be offered.

Two pastoral runs in the Ashley and Oxford counties will be subdivided into five pastoral runs and offered during the coming year.

The eight Greta Peaks small grazing-runs at Scargill, comprising 13,000 acres, have been subdivided, and will also be offered.

Transfers.

The total number of transfers approved by the Land Board was 217, comprising an area of 330,970 acres. The total number, omitting the temporary licenses, is shown hereunder:—

Tenure.	Number of Transfers.	Area. A.	R.	P.
Lease in perpetuity: Land for settlement ...	91	13,172	3	20
,, Ordinary Crown land ...	24	6,138	2	4
Renewable-lease lands for settlement	14	3,593	2	17
Education reserves	16	2,175	1	22
Pastoral runs	13	272,655	2	0
Small grazing-runs	9	29,445	2	25
Farm-homestead leases	5	550	1	34
Village-homestead leases	22	694	0	2
Grazing-farms	1	1,886	0	0
Perpetual lease (Crown land)	1	60	0	0
Miscellaneous (licenses)	21	...		
	217	330,370	0	4

Twelve transfers were refused.

Forest and Scenic Reserves.

The only scenic reserves in the district upon which any work has been done during the year are those situated in the Port Hills, and separate reports on these will be forwarded.

CHEVIOT ESTATE.

The permanently residing population is now approximately 1,030 souls. The value of improvements effected is estimated at £126,298; area in crop, about 7,300 acres. The Cheviot lands are now benefiting by the advent of the railway, which is enhancing the unimproved value of the holdings. The holders of small areas are dairying, and using the railway to convey the produce to the factories further down the line. The Cheviot Settlement is prosperous.

DEPARTMENTAL.

The total number of ordinary meetings of the Land Board was thirteen, and there were thirteen special meetings held during the year. The number of imprest vouchers was 497, covering £4,401 10s., and the pre-audit vouchers amounted to 485, amounting to £34,549 17s. 9d., the total being 955, for £38,951 7s. 9d.

The office staff has been kept busy in disposing of the large number of settlements, and an exceptional number of statutory applications were received, considered, and dealt with.

Mr. R. McNab, the Receiver of Land Revenue, was retired on superannuation after thirty-five years of honourable service, and was succeeded by Mr. G. W. Palmer. Mr. John Forrester, Crown Lands Ranger, was also retired on superannuation during the year, after fifteen years' faithful service.

I have much pleasure in thanking all officers for their assistance since I assumed charge in June, 1912, having succeeded Mr. T. N. Brodrick, who was transferred to Wellington.

C. R. POLLEN,
Commissioner of Crown Lands.

OTAGO.

The progress of settlement in this district is shown by the fact that the area now held is 5,731,525 acres, from which accrues an aggregate yearly rental of £126,526 16s. 9d. The net result of the past year's transactions was to bring seventy-three more tenants under the Land Board's jurisdiction, holding an area of 37,290 acres. Of these new tenants, fourteen took up farms which were subdivisions of the Elderslie No. 2 Settlement, near Enfield, and nine selected holdings when the Otanomomo Settlement, near Balclutha, was placed upon the market.

It is a pleasure to me to record that the Crown tenants in this district are, on the whole, satisfactorily fulfilling the conditions of their leases, and that land-speculators are rarely in evidence. The tenantry experienced an unusually good season during the past twelve months, and have thus been enabled to pay their rents promptly.

LAND TENURES AND TRANSACTIONS.

During the year twenty tenants availed themselves of the opportunity to convert their holdings into freeholds, and in this way the Crown parted with the fee-simple of 2,457 acres. Of these twenty tenants, one held a deferred-payment license, nine perpetual leases, five occupation-with-right-of-purchase licenses, two leases in perpetuity, one a village-settlement deferred-payment license, one a village-settlement perpetual lease, and one a village-homestead lease in perpetuity. Although tenants of farms of ordinary Crown land under the 999 years' lease have so far been slow to acquire the fee-simple of their lands, yet numerous inquiries have been made as to the terms of conversion, and there are not wanting indications that there will shortly be a brisker demand for the freehold of these leases in perpetuity. New selectors still evince a partiality for the occupation-with-right-of-purchase tenure, more especially as the right of purchase is now exercisable at any time after six years from the date of the license. Seventeen new settlers marked their preference in this way in respect of land offered under the optional system—that is to say, in relation to land offered for cash, on occupation-with-right-of-purchase tenure, or under the renewable-lease tenure. Six small grazing-runs of national-endowment land, comprising 20,356 acres, were also leased. Two of these runs were subdivisions of Moutere Station, near Clyde, and three were subdivision of Lochindorb Station, near Clinton. The large number of applications lodged for this class of pastoral country shows that there is still existent a keen demand for land suited for the grazing of sheep. Nine pastoral runs, of a total area of 99,236 acres, and bringing an annual rental of £1,270 4s., were also leased. One of these runs was a large tract of land in the Lakes District, 57,400 acres in extent, and let at £5 a year.

Among minor transactions there was noticeable a slightly increased desire for timber country, eleven new licenses over 1,830 acres having been issued to various sawmilling enterprises.

ARREARS OF RENT.

The amount of rent in arrear, exclusive of the current half-yearly instalments payable in advance, is £233 17s. 8d. in respect of all tenures. The sum outstanding at this time last year was £1,178 1s. 4d., so that the considerable reduction effected—due, no doubt, in a large measure to the excellent season experienced—cannot but be regarded with satisfaction. It is noteworthy also that not a single tenant had cause to apply for a remission in rent.

FORFEITURES AND SURRENDERS.

Thirty-seven tenants forfeited their holdings either through failure to pay the rental at the due dates, non-improvement of their land, or non-compliance with the residential conditions.

None of these forfeitures was of any magnitude, and the resultant loss in revenue was small. Fifteen tenants surrendered the leases of their sections, one of these tenants being a new settler on Conical Hills Settlement, who abandoned his farm of 436 acres without any real attempt to test the worth of his holding. The section has since been relet. The other surrenders do not call for special comment.

TRANSFERS.

Transfers of leases were granted during the year as follows :—	No.	Area. Acres.
Lease in perpetuity (ordinary)	44	12,371
,, (land for settlements)	50	9,339
Renewable lease (ordinary)	12	1,850
,, (land for settlements)	5	5,009
Occupation with right of purchase	17	1,448
Small grazing-runs	35	136,225
Perpetual leases	14	1,996
Occupation leases	16	512
Pastoral runs	19	319,809
Miscellaneous licenses	38	5,456
Education-endowment leases	24	1,558
Totals	274	495,573

EDUCATION ENDOWMENTS.

In dealing with these lands the Land Board, while not overlooking the interests of closer settlement, affirmed the principle of obtaining the highest revenue for education, and in cases where deemed advisable the lands comprised in expiring leases were disposed of by auction under the provisions of the Public Bodies' Leases Act, 1908. The term of lease fixed for rural lands was twenty-one years, with perpetual right of renewal, at a rent to be fixed by arbitration at the end of each term of twenty-one years. The term of lease for town lands was twenty-one years without right of renewal. In a number of instances it was deemed desirable to grant the outgoing tenants a renewal of lease for twenty-one years at rentals fixed by the Board, the lessee having an option either to accept a renewal of lease at the end of the term of twenty-one years (said rent to be fixed by arbitration) or to have a lease offered for sale by auction, and so on from time to time in perpetuity. In most cases the rent obtained was considerably greater than the former rent. During the year rents were paid punctually in advance, and the total of arrears at the end of the year was comparatively small.

There are several small reserves in the Otago District (principally quarter-acre township sections) which are unletable and unproductive of revenue. I suggest that statutory power be conferred on the Land Board either to sell such sections or to exchange them for other land from which an income could be derived.

E. H. WILMOT,
Commissioner of Crown Lands.

SOUTHLAND.

The total number of tenants now on the books in this district is 3,118, and the total area leased, including endowments, is 2,180,871 acres 3 roods 15 perches, while the annual rental amounts to £42,382 13s. 10d. The gross revenue received for the year was £52,890 1s. 8d., which is slightly under last year's revenue, but exceeds the estimate by £3,075.

LAND TENURES AND TRANSACTIONS.

An area of 611 acres was sold for cash to twenty-four purchasers, while tenants under the various tenures acquired the freehold of the following areas: Perpetual lease, two lessees, area 162 acres; occupation with right of purchase, nineteen licensees, area 3,146 acres; lease in perpetuity, thirteen lessees, area 5,472 acres; occupation with right of purchase (improved farms), two licensees, area 160 acres; perpetual-lease village, three lessees, area 38 acres; lease in perpetuity, village, twenty-one lessees, area 278 acres.

The selections under the occupation-with-right-of-purchase system numbered forty-five, and the area selected 8,987 acres. The renewable lease (ordinary) selections were thirty-one, with a total area of 6,075 acres; while an area of 2,067 acres was selected on the renewable-lease land-for-settlement tenure by eleven applicants.

The only transactions under "Pastoral Run" heading were two selections of Crown runs and one national-endowment selection. These runs were held formerly, and were sold twelve months ago with possession on 1st March last. Sixty-nine temporary and miscellaneous licenses were granted over an area of 7,269 acres, and incidentally it might be mentioned that this tenure is very useful in Southland, as it enables reserves and Crown lands which cannot be offered on permanent tenures to be leased to tenants at a nominal rent, subject to all existing rights and to the destruction of weeds. During the year fifty-one education-endowment leases, embracing an area of 6,166 acres, expired, while there were thirty selections, covering an area of 3,901 acres, and twenty-five renewals with an area of 4,897 acres. There are now 779 tenants of education-endowment lands, with a total area of 337,492 acres, and an annual rental of £14,352, and it has been found that both the administrative and office work in connection with these lands is and will continue to be very considerable.

ARREARS OF RENT.

The outstanding rents at the close of the year amounted to only £386 6s. 5d. owing by nineteen tenants. This result is highly satisfactory, and it is anticipated that the arrears will be paid, as in the majority of cases good reason has been given for non-payment.

FREEHOLD TITLES ISSUED.

The subjoined table shows the number of provisional titles issued during the year by the Receiver of Land Revenue:—

Tenure.	No.	Area in Acres.
Cash	24	611
Perpetual lease	2	162
Occupation with right of purchase	19	3,146
Lease in perpetuity	13	5,472
Perpetual lease, village	3	38
Lease in perpetuity, village	21	278
Occupation with right of purchase (improved-farm settlement)	2	160
Totals	84	9,867

Compared with last year's figures, this table shows a decrease of twenty-four purchasers and 5,390 acres, and this was responsible for the slight decrease in revenue as mentioned in my opening paragraph.

TRANSFERS.

During the year 212 transfers were approved by the Land Board and registered. The following table gives particulars of transfers under the various tenures:—

Tenure.	No.	Area. A.	R.	P.
Lease in perpetuity (ordinary and village homestead)	57	9,233	0	24
,, (land for settlement)	21	4,217	2	4
Occupation with right of purchase	29	5,383	1	30
Perpetual lease	3	850	3	29
Mining-district land-occupation leases	3	112	3	33
Renewable lease (ordinary and village homestead)	12	1,784	3	26
,, (land for settlement)	1	269	0	0
Small grazing-runs	3	12,536	0	21
Pastoral licenses	5	56,380	0	0
Miscellaneous	23	1,644	2	35
Sawmill areas	1	200	0	0
Certificates of occupation	2	156	3	5
Education endowments	52	21,009	1	35
Grand total	212	113,779	0	2

LANDS OPENED FOR SELECTION.

During the year an area of 23,883 acres was placed on the market, and the greater part of the same selected. The land opened was mostly worked-out bush areas, and in nearly every case the competition at the ballot was keen, as will be seen by a glance at the following table, which shows that 433 applications were received for eighty-three sections:—

Block.	Number of Sections.	Number of Applicants.
Longwood	11	23
Campbelltown	8	2
Maori Hill	10	38
Jacob's River	6	20
Longwood	7	63
Mokoreta	2	49
Invercargill	17	58
Aparima	4	27
Invercargill	1	24
Alton	3	95
Aparima	7	6
Invercargill	7	28
	83	433

Maori Hill Settlement was purchased under the Land for Settlements Act, and opened for selection during the year. The whole of the sections offered except one have been disposed of, and in view of the outside competition and the present tightness of the money-market the result of the sale is very satisfactory.

LANDS TO BE OPENED FOR SELECTION.

I hope to be in a position to place about 18,500 acres of new lands in the market during the current year, and in the meantime the surveys of the blocks are being pushed on as expeditiously as possible. The lands referred to, with the exception of about 1,000 acres at Waikaka, are mostly worked-out sawmill areas, and are situated in Alton, Longwood, Hokonui, Aparima, Lillburn, New River, and Campbelltown districts. Worked-out bush country is eagerly sought after in Southland, and I anticipate that the lands will be selected when opened to application.

General Remarks.

Taken on the whole, Crown tenants have experienced a fair year, and the prices of stock and produce have been satisfactory. The weather, however, has not been all that could be desired. The spring was cold and wet, and this naturally retarded the farmer in his cultivation and sowing operations. Again, the harvest weather was not of the best, and much anxiety and trouble were experienced in saving the crops. Towards the end of March several of the Southland rivers were badly flooded, and it is reported that a number of the tenants, chiefly education-endowment ones, on the Mataura River, have had considerable losses of stock and improvements.

Grass has been plentiful, and the dairying industry has been good. At the present time there are fifty-six cheese factories and four butter and condensing factories in actual operation throughout the district. A very considerable number of Crown tenants are suppliers to these factories, and thus obtain ready money monthly, which enables them to improve their farms, and thus increase the carrying-capacity. The intake of milk at these factories ranges from 800 gallons to 12,000 gallons per day.

Crown tenants, with few exceptions, continue to fulfil the conditions of their respective leases in a satisfactory manner, and, on the whole, appear to be a very satisfied community.

Departmental.

The period under review has been a very strenuous one for the clerical staff, the volume of work going through the office having increased considerably, and some of the newer work, such as renewals and arbitration of education leases, small grazing-runs, and perpetual leases, requires close attention and careful handling. The work in connection with education leases in this district is, and always will be, of an important nature. All officers have worked well on the particular duties allotted them, and I have much pleasure in recording my appreciation of the cheerful and willing assistance I have at all times received from my staff.

G. H. M. McClure,
Commissioner of Crown Lands.

APPENDIX II.—LAND FOR SETTLEMENTS (EXTRACTS FROM REPORTS OF COMMISSIONERS OF CROWN LANDS ON).

AUCKLAND.

There has been comparatively little change in the estates held under the Land for Settlements Act, but the general progress noted in last year's report has been well maintained, and the condition of the settlers is, on the whole, one of sound prosperity. Dairying is the staple industry of most of the settlers, so that the amount of white crops grown is small, but green crops are grown with success, and satisfactory attention is paid to the renewing and improvement of pastures. The dairying industry also leads to the subdivision of many of the large sections on the old and well-established settlements, as the holders find that when once the lands have been brought into reproductive condition the smaller areas can be worked to proportionally better advantage. The improvements on most of the holdings are much in excess of statutory requirements, and the conditions of the leases are satisfactorily fulfilled.

The suburban settlements near Auckland are in a flourishing condition, and afford comfortable homes, and supplementary incomes from fruit and poultry, to the tenants, many of whom are now seeking to acquire the freehold of their sections.

H. M. Skeet,
Commissioner of Crown Lands.

HAWKE'S BAY.

There are now eighteen settlements in the southern portion of this district. Two of these —Sherenden and Waihau—have only been recently acquired and opened for selection. Sherenden was all selected at the ballot, and the settlers have already made considerable headway in stocking, fencing, and erecting residences. It is pastoral country, best adapted for sheep, and three parts of it is ploughable, and responds excellently to cultivation. Waihau Settlement, consisting of the Waihau, Ngaroto, and Peka Peka Estates, was not in great demand, and only half the sections were selected at the ballot, but since all but two sections have been taken up. The probable reason of the non-selection of this settlement is due to the poor access, non-construction of through roads, and its bad appearance at the time of the ballot, due to the dry season of five to six months' duration. Of the other sixteen settlements, only eight have been inspected, owing to the work of the Ranger in other directions being exceptionally heavy. The other eight were well beyond the requirements at last inspection. The value of the improvements effected is more than double the requirements of the Act.

In the smaller settlements near Hastings dairying and fruit-culture are the principal sources of income, but the former industry has suffered to some extent through the prolonged spell of dry weather.

The Raumati Settlement, near Dannevirke, has also suffered damage and loss through recent bush-fires, which have in some cases destroyed buildings and in others burnt considerable areas of grassed country used for dairying purposes, thus diminishing the milk-supply, and rendering it necessary in some instances to dispose by sale or otherwise of a number of dairy stock.

In the Tongoio Settlement experiments are being made for the purpose of destroying the blackberry. The brambles on the scenic reserve and other spots specially chosen for the experiment have been sprayed with various poisonous solutions to test their efficacy, but it will be a few weeks before a definite opinion can be given as to which is the best spray, and whether it is likely to effect the complete destruction of the pest. It is very certain that one cutting a year is of very little use, as those cut on this estate last year have since grown trailers 6 ft. to 7 ft. long, and the cost of cutting even once a year is quite prohibitive. If the experiment is a success it will solve a difficult problem not only on Tongoio, but in many other blackberry-infested districts in the Dominion.

There is nothing of special note in connection with the other settlements, which are all in a very satisfactory condition, and furnish ample proof of the great advantages of closer settlement.

In the northern part of the district, round Poverty Bay, there are eight settlements—viz., Pouparae, Waimarie, Willows, Wigan, Te Arai, Kanakania, Ngatapa, and Clydebank. All the sections on these settlements have been selected, except a small section of 9¾ acres in Te Arai Settlement, which has just been forfeited for non-compliance with the residential conditions.

The value of the improvements effected, including the original improvements, is double those required by the Act. There are very few defaulters, and their non-compliance with conditions is not serious. The settlers are all doing well, and the progress made is very satisfactory indeed.

The settlements are all so well established in this part of the district that little can be added to the reports of previous years. This portion of the district, in common with other parts of Hawke's Bay, suffered considerably from the long dry spell extending through the summer and autumn, and was the most prolonged drought experienced for many years.

ROBT. T. SADD,
Commissioner of Crown Lands.

TARANAKI.

Tokaora.—Once again I have to report a most prosperous year for this settlement. All the settlers are doing well, and improving their holdings as far as it is possible on highly improved land such as this is. With electric power so close, many of them are installing electric milking-machines, and are having their houses and sheds lit by electric light, while the improvement made to the buildings is most marked.

Clandon.—This settlement appears to improve each year. The majority of the settlers are clearing their land of the dead timber, and are ploughing up every available piece with the idea of regrassing as much as possible. As far as I can ascertain, all these settlers are doing well.

Huinga.—Taking this settlement as a whole, it appears to be in a fairly prosperous condition. Those settlers who have been able to continue milking on their holdings are doing well, but there are one or two who, from one reason or another, have gone in for sheep, and this hardly pays on high-priced small areas such as these farms are. Without doubt the change from cows to sheep is beneficial to the land, but the latter do not pay as well as the former. Some of the settlers are now going in for hedge-planting along their permanent fence-lines, foreseeing the time when fencing timber will be extremely scarce in the neighbourhood.

Spotswood.—The improvement in this settlement during the year is most marked. A number of new houses have been erected on the sections taken up, and others are in course of construction. All the section-holders are apparently satisfied with their holdings, though some of them would like to increase their size, as they see the time approaching when a rise in values is almost certain. There are still some sections in the settlement undisposed of, and it may be desirable to offer them under Part IV of the Act of 1912 in fee-simple.

G. H. BULLARD,
Commissioner of Crown Lands.

WELLINGTON.

In the west coast portion of the Wellington District the settlements are for the most part situated in the vicinities of Feilding, Bull's, and Lower Oroua, and the tenants on them engage principally in dairying, cropping, and fruit-growing. The settlements in this locality are now so well established and developed, and their success is so undoubted, that little can be added to reports of previous years.

The majority of the land-for-settlements estates are found in the east coast division of the district, and on these the settlers are engaged in mixed farming, the higher areas being utilized for grazing and the lower for dairying and agricultural purposes.

On the estates in the vicinity of Wellington the holdings are principally used as residential sites, but where their sections are suitable some follow poultry-farming and market-gardening.

On the whole, the settlement tenants have experienced a good year, high prices having been obtained for wool, fat stock, and dairy produce, although the prices ruling for the latter were somewhat lower than those obtained last year.

The total value of the improvements on the land-for-settlement estates in the district under my control is set down by the Rangers at £200,139.

Holdings under the Land for Settlements Acts appear to be very popular, and I am advised that a number of prospective settlers of a good class are looking for desirable areas under these tenures.

T. N. Brodrick,
Commissioner of Crown Lands.

NELSON.

In this district there are only two settlements—Wangapeka and Braeburn. The former, which is mostly open country, has not had a very good season, owing to the deficient rainfall on the Nelson side of the watershed. The Braeburn Settlement is mostly heavy bush on the West Coast, and, as it is comparatively a new settlement, is dependent to a considerable extent on the dairying industry until such time as sufficient bush is felled to enable the settlers to adequately stock their holdings with sheep. The roading is not yet well enough advanced for the tenants to get their milk to the factory in anything like the quantity that would otherwise obtain with good roads, and this accounts to a great extent for the large amount of arrears of rent—viz., £792. Every year, however, this disability is being lessened, and the outlook for this settlement is distinctly promising.

F. A. Thompson,
Commissioner of Crown Lands.

MARLBOROUGH.

All the areas acquired under the Land for Settlements Act in this district are now occupied either under permanent or temporary lease, with the exception of a few township allotments in Seddon and Ward.

The 3,134 acres in the North Bank Settlement which was withheld from selection on account of mining has now been let on temporary lease.

The total population on the land-for-settlements holdings now number 1,130, an increase of eighty-two on last year's figures. The number of sheep again show a decrease, being only 110,709, against 117,814 of last year; this decrease is the result of the settlers realizing that better returns are obtained for wool and fat stock by understocking. Cattle have increased from 1,217 to 1,503, owing principally to a number of the settlers on the smaller holdings going in for dairying in the vicinity of Ward, the growing of lucerne enabling them to utilize the dry country. The acreage in white crops has increased from 9,825 to 10,027 acres; and of green crops, from 6,385 to 9,270 acres.

The number of transfers of land-for-settlements rural holdings during the year was only ten, showing that the great majority of the settlers are doing well. The value of the goodwill of sections, especially in Starborough, Richmond Brook, and Blind River, continue to increase every year, and as much as £20 per acre has been asked for land in the vicinity of Seddon, nearly four times the amount the lessee is paying rent on; and it is very seldom a leasehold is offered except in the case of a lessee wishing to retire from farming.

The climatic conditions were very variable and broken during the year; but, taken as a whole, all the tenants have done well, both at agricultural pursuits and sheep-farming; the want of rain in the autumn will, however, affect the winter feed for stock.

The townships of Seddon and Ward have not made much headway in the way of population; but Seddon will continue to be the outlet for the surrounding district. The number of subscribers to the Telephone Exchange now number over eighty, and nearly all the lessees on the rural holdings are connected.

The settlers at Ward have built a public hall and library, and saleyards have been erected by the Settlers' Association, and regular sales are now held during the summer.

The total value of improvements on land-for-settlements holdings is £202,478, against £90,483 required by the Act.

The reports of the Crown Lands Rangers show a steady increase of prosperity, and the bulk of the settlers are now assured of a prosperous future.

W. H. Skinner,
Commissioner of Crown Lands.

WESTLAND.

Only two estates in this district have been acquired for closer settlement under the Land for Settlements Acts—namely, Kokatahi and Poerua—and both have given very satisfactory results commercially. The total values on which rents were originally based amounted to £10,771, being an average of £2 3s. per acre, whereas the present unimproved value of the whole is assessed at £26,812, being an average of £5 8s. per acre. The original unimproved values ranged from 5s. to £4 2s. 6d. per acre, but the range in value at present is from £1 to £10 per acre. It is, however, worthy of note, as illustrating the *bona fides* of the tenants, that, notwithstanding the increases in values, very few transfers have taken place. The tenants without exception are very well satisfied with their holdings, and are farming them to good advantage. Improvements of a total value of £16,547 have been effected. Both of the settlements are being utilized largely for dairying purposes, and are carrying 1,420 head of cattle and 1,559 sheep, and supporting a population of upwards of a hundred persons.

H. D. M. HASZARD,
Commissioner of Crown Lands.

CANTERBURY.

LAND OPENED FOR SELECTION.

Fourteen new settlements were opened for selection under renewable-lease tenure during the year as follows: Timaunga, nineteen sections, all disposed of; Four Peaks, eight sections, all disposed of; Avenel, seventeen sections, all disposed of; Valverde, eleven sections, all disposed of; Winchester, ten sections, all disposed of; Aylesbury, six sections, all disposed of; Waimate, thirty-five sections, thirty-three disposed of; Bourndale, seven sections, six disposed of; Claremont, eleven sections, all disposed of; Timaunga Extension, seven sections, two disposed of; Avenel Extension, nine sections, eight disposed of; Mount Nessing, eleven sections, all disposed of; Ashwick, eight sections, all disposed of; Strathmore, three sections, all disposed of. And the following were reopened: Scargill, one section, and Valverde, one section, both of which were disposed of.

In the case of the Waimate Settlement, all the sections but two have been disposed of, and these will probably be taken up at any time. The five unselected sections in Timaunga Extension Settlement will be regrouped and offered shortly, when there is every indication that they will be selected.

The competition was keen for the pastoral areas, as many as eighty-seven preference applicants going to ballot for some of the sections. The agricultural sections did not receive such favour, partly owing to the scarcity of labour and partly to the smallness of some of the sections. In two settlements the sections offered were not all selected at time of ballot, but are now being gradually taken up, some of the unselected sections being absorbed by the adjoining holders, and the balance grouped and are to be offered in larger holdings.

GENERAL.

Of the ninety-one settlements now established in this land district, it may be said that, as a whole, they are fairly prosperous, some more so than others. They comprise an area of 488,456 acres, occupied by 1,677 tenants representing 5,522 souls. The Rangers' reports of the new settlements opened this year are not yet due, but there is evidence that the majority are well satisfied, and needful improvements are being effected.

C. R. POLLEN,
Commissioner of Crown Lands.

OTAGO.

The settlers holding land under Land for Settlements Acts in Otago have had a fairly successful year, although the weather has not been all that could be desired. On the 13th February a violent storm came up from the south-west, followed by hail and rain. The hail did an immense amount of damage to the crops, especially in North Otago. In some parts the wheat and oat crops suffered severely. The rape was in many instances completely destroyed.

The weather was dry up till January. After that a good deal of rain fell. The dry hot winds in December prematurely ripened the wheat crops. The yield, in consequence, is light, and will probably average not more than half of what it was last year. The root crop in North Otago is very poor—in many cases a complete failure. In the south the roots are much better, and will be a great help in carrying the sheep over the winter. The grass generally throughout the country is good, and to that fact is due the healthy condition of the dairying industry. The creameries distributed throughout Otago are proving a great source of profit to the small farmers, and many of these are getting into quite an independent position. Those settlers on the large areas do not intend in the future to go in for grain-growing to any great extent, on account of the difficulty of securing labour. Most of the settlers are fast getting their land down in grass, and will go in for fat lambs for freezing. The price for lambs opened this year at 18s. but came back to 17s.; at which price farmers are doing well. Taken on the whole, our settlers are in a very good position, in spite of the unfavourable weather-conditions and the scarcity of labour.

A heavy flood in the Clutha did a good deal of damage to potato-crops on Barnego Flat in October last. The settlers on this portion of the settlement again suffered through a heavy flood in the river on the 28th March, which did a good deal of damage to the crops and the protective bank at the top of the flat.

E. H. Wilmot,
Commissioner of Crown Lands.

SOUTHLAND.

Maori Hill Settlement, situated near Tuatapere, in the Waiau district, and comprising an area of 3,533 acres, was acquired, and 3,369 acres was placed on the market during the year, with possession to the tenants on 1st May, 1913. At the present time only one of the ten sections offered remains unselected.

The total number of tenants under the Land for Settlements Acts is now 281, holding an area of 57,730 acres, and paying an annual rental of £12,425. There are 247 residences on the settlements, and the population residing on the holdings is 1,130; while the value of the improvements effected amounts to £102,442, as against £65,362 required by the Act. The total stock on the eight settlements is: Sheep, 36,566; cattle, 7,194; horses, 1,426; and pigs, 846.

During the year an area of 4,716 acres was laid down in new grasses, and as years go on the tenants are gradually increasing the value and carrying-capacity of their holdings.

The climatic conditions for the last year have not been good, the spring being cold and wet and the harvest season being unsatisfactory. Prices of stock and produce, however, have been good, and settlers who are suppliers to the dairy factories have had a successful year.

Generally speaking the conditions of the leases are being well complied with, and the tenants appear to be in a very satisfactory position in every respect.

G. H. M. McClure,
Commissioner of Crown Lands.

APPENDIX III.—THE TIMBER INDUSTRY.

EXTRACTS FROM REPORTS OF COMMISSIONERS OF CROWN LANDS.

AUCKLAND.

The exceptional briskness in the timber trade that has been experienced for the past six or eight years is still being well maintained, although towards the end of the year there was a slight temporary falling-off in the sales of sawn timber other than kauri timber, but which has since revived itself. This, however, did not affect the comparatively high ruling prices for all classes of sawn timber, nor were the prices offered at auction sales for standing timber affected. In most instances keen competition and high prices were obtained.

It may be worthy of note that since the figures quoted in the 1910–11 Report, showing the marked increases in prices for sawn kauri timber for the period July, 1899, to December, 1910, the prices have further risen during the year by 4s. per 100 superficial feet on ordinary building-timber, and varied increases on other classes. The retail prices for sawn totara, matai, and rimu timber have also been subjected to two substantial increases during the past year, the last increase being 3s. 6d. per 100 superficial feet on ordinary building-timber, making a total increase of 6s. per 100 superficial feet on the 1903 retail price-list.

Owing to the fast-decreasing supplies of kauri timber, the attention of sawmillers and agents has been directed in a very marked degree towards the purchase of totara and rimu bushes, and during the year large sales by Native and private owners have been effected, more especially in and around the Rotorua and Tauranga districts.

During the year five timber-measuring parties were employed, three of whom were engaged the greater part of the time measuring on the Mangatotara Block, Tauranga district, but owing to the retirement from the service of two of the timber-measurers and the removal of one measurer to Mamaku on urgent work, operations in this block were temporarily suspended. It is estimated that this block contains fully 30,000,000 ft. of good-quality rimu, &c.

The following table shows the various kinds of timber disposed of during the year ended 31st March, 1913:—

——	Kauri.	Rimu.	Kahikatea.	Totara.	Matai.	Miscellaneous.	Total.	Amount realized.
								£ s. d.
Crown lands (including national endowments)	6,362,746	2,732,612	2,442,168	268,198	179,661	35,832	12,021,217	10,561 17 3
State forests	190,993	..	..	63,282	..	341,104	595,379	491 16 6
Education reserves ..	640,248	42,340	72,232	15,742	2,212	..	772,774	764 2 0
	7,193,987	2,774,952	2,514,400	347,222	181,873	376,936	13,389,370	11,817 15 9

Export of timber from 1st April, 1912, to 31st March, 1913:—From Auckland: Kauri, 13,624,101 sup. ft., value £121,059; kahikatea, 18,307,010 sup. ft., value £81,704; other kinds, 1,700,041 sup. ft., value £6,623: total, 33,631,152 sup. ft., value £209,386. From Kaipara, Kauri, 6,342,873 sup. ft., value £45,076; kahikatea, 19,325,955 sup. ft., value £88,049; other kinds, 1,673,353 sup. ft., value £5,994: total, 27,342,181 sup. ft., value £139,119.

Imports of timber from 1st April, 1912, to 31st March, 1913:—Auckland: Sawn timber, 5,862,980 sup. ft., value £50,947; laths, logs, shingles, palings, posts, rails, &c., value £2,446: total value of timber imported, £53,393. Kaipara: Sawn timber, 48,570 sup. ft. value £652; logs, value £539: total value of timber imported, £1,191.

Timber-floating: New licenses granted, 12; licenses renewed, 67; duplicate license, 1; licenses in existence, 138.

The Inspector of Forests (Mr. J. H. Boscawen) reports that during the year he has visited and inspected all the State forests in the district. The drought in the northern district and the destructive fires which swept over many localities proved a source of anxiety, but fortunately the Crown forests, with one lesser exception, escaped damage. In all the northern forests the effect of the drought has been very noticeable, the delicate fern and shrub undergrowth being completely withered and the streams dry. The drought has also hampered the operations of the timber-mills, as huge quantities of logs have been locked up waiting heavy rains to bring them down. This is, however, causing millers to depend more on tramways, which, owing to the high price of timber, can now be constructed only at very considerable cost. Unfortunately, much wasteful method still prevails in dealing with the dwindling timber resources of the Dominion. Amongst such evils may be mentioned the non-utilization of by-products from the mills; the neglect of some of the smaller and less known, yet often beautiful and durable, timber-trees; and the felling of timber all the year round instead of in the winter only, so as to cause the wood to season properly.

H. M. Skeet,
Commissioner of Crown Lands.

NELSON.

In the northern part of this district there are twenty-two sawmills operating, mostly in a small way, the total output being only about 4,800,000 ft. In the Buller and Inangahua Counties eighteen mills are working, with an output last year of some 13,000,000 ft. The export of timber from this district is practically nil, it nearly all being used in the vicinity of the respective mills.

F. A. Thompson,
Commissioner of Crown Lands.

MARLBOROUGH.

There have been eight mills working in the northern portion of the district, and one in the southern part near to Kaikoura. This latter cuts for local requirements only, and is rapidly nearing the end of the supplies. Those mills in the north are situated in the Opouri, Rai, and Wakamarina Valleys, and cut for export to Australia and to other parts of the Dominion, as well as supplying the local market. The general conditions of the timber industry in this district have been good for the past year, and the prospects for the coming year are fair, so far as one can predict. The total output for the year amounted to 12,113,079 ft., made up of 7,734,502 ft. of rimu, 3,456,068 ft. of kahikatea, 731,932 ft. of matai, 145,870 ft. of totara, 44,607 ft. of beeches; and the royalty received totalled £3,226 15s. 10d. Of these totals 10,831,342 ft., with royalty of £2,845 4s. 9d., was obtained from State forests; and 1,281,737 ft., and £381 11s. 1d. royalty, from Crown forests.

It is estimated (approximately) that there remains about 70,000,000 ft. of available milling-timber on State forest reserves and Crown lands in this district, or, roughly, eight or ten years' cutting on a gradually diminishing output.

W. H. Skinner,
Commissioner of Crown Lands.

SOUTHLAND.

Notwithstanding the lull in the timber trade during the last four months, the sawmillers in Southland have had a fairly busy year. Fifty-eight mills were at work, forty of which were working chiefly on Crown and State forests, sixteen on private forests, and two on Native lands. These mills produced approximately 48,000,000 ft., some 600,000 ft. of which were shipped to Australia, and about half the balance was delivered south of Gore and the remainder placed between Gore and Christchurch. During the year over a thousand persons were engaged in the timber trade, and £122,000 paid in wages.

One of the largest mills in Southland—viz., Woodend—has cut out and the mill dismantled. The land worked by this mill has been surveyed, placed in the market, and nearly all selected.

G. H. M. McClure,
Commissioner of Crown Lands.

Table 1.—RETURN SHOWING (APPROXIMATELY) POSITION OF LANDS IN THE DOMINION AT 31ST MARCH, 1913.

District.	Total Area sold and held on Freehold.	Total Area granted under Acts without Money Payment or reserved for Public Purposes from Foundation of Dominion.	Total Area of Crown Lands leased under all Tenures (exclusive of Reserves leased by Crown).	Total Area open for Selection.	Total Area of Native Land.	Estimated Area of Barren and Worthless Country not already included under any of the other Headings.	Estimated Area occupied by Roads, Rivers, Lakes, &c.	Total Area remaining for Future Disposal, exclusive of Land shown in Preceding Columns.	Total Area in Land District.
	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.
Auckland	2,263,461	3,633,866	1,896,861	242,089	3,571,889	..	655,499	1,253,775	13,517,440
Hawke's Bay	2,387,839	436,520	918,499	5,623	1,430,863	..	150,120	179,436	5,508,900
Taranaki	483,267	715,659	555,166	6,035	328,384	..	54,483	269,606	2,412,600
Wellington	3,181,810	906,353	878,453	3,021	1,620,103	36,500	195,110	229,650	7,051,000
Nelson	567,413	307,863	804,672	45,921	41,155	1,573,000	60,000	1,314,976	4,715,000
Marlborough	844,259	237,563	1,405,924	17,382	..	114,309	100,052	48,511	2,768,000
Westland	136,496	257,526	1,578,785	47,808	..	750,000	154,167	939,096	3,863,878
Canterbury	3,644,735	1,364,864	3,906,865	2,811	..	233,650	441,163	9,957	9,604,045
Otago	1,977,837	590,268	5,498,523	6,745	..	520,000*	263,300	112,327	8,969,000
Southland	1,584,231	3,550,233	1,726,149	27,959	..	629,368†	140,302	224,127	7,882,369
Totals	17,071,348	12,000,715	19,169,897	405,394	6,992,394	3,856,827	2,214,196	4,581,461	66,292,232

* In last year's returns an area of about 100,000 acres was omitted.

† Owing to the revision of the total area in the Southland Land District this item has been considerably increased.

NOTE.—The total area in some of the land districts has been revised since last year's report.

Table 2.—Lands opened for Sale and Selection during the Year ended 31st March, 1913.

District.	Optional System.	Cash by Auction.	Lease by Auction and Application.	Village Allotments.	Pastoral Runs.	Small Grazing-runs.	Renewable Lease.	Totals.
	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.
Ordinary Crown Lands—								
Auckland	41,943	659	1,057	..	*710	4,272	2,179	50,820
Hawke's Bay	13,034	211	451	..	..	..	..	13,696
Taranaki..	22,325	152	..	..	..	..	..	22,477
Wellington	8,542	19	85	109	..	..	4	8,759
Nelson ..	1,214	..	..	9	..	..	1,602	2,825
Marlborough	10,131	..	..	..	1,590	..	..	11,721
Westland	..	20	343	1	..	..	1,714	2,078
Canterbury	..	63	..	..	445	..	..	508
Otago ..	1,787	94	..	21	..	8,300	1,602	11,804
Southland	15,148	132	46	..	..	..	5,188	20,514
Totals ..	114,124	1,350	1,982	140	2,745	12,572	12,289	145,202
Cheviot Estate—								
Canterbury	..	..	..	..	..	..	634	634
Land for Settlements—								
Auckland	..	13	..	..	..	..	422	435
Hawke's Bay	..	..	..	..	..	..	26,481	26,481
Taranaki..	..	..	..	..	..	..	..	..
Wellington	..	..	..	..	..	..	239	239
Nelson ..	..	..	..	..	..	..	..	..
Marlborough	..	..	..	..	..	..	15	15
Westland	..	..	..	..	..	..	..	..
Canterbury	..	..	..	..	..	..	96,196	96,196
Otago ..	..	..	..	..	..	..	4,077	4,077
Southland	..	..	..	..	..	..	3,369	3,369
Totals ..	..	13	..	..	..	..	130,799	130,812
National Endowment—								
Auckland	..	..	..	..	..	6,290	16,759	23,049
Hawke's Bay	..	..	..	..	..	..	..	..
Taranaki ..	..	..	..	..	..	..	1,541	1,541
Wellington	..	..	..	..	..	..	981	981
Nelson ..	..	..	..	..	..	..	516	516
Marlborough	..	..	..	..	..	..	..	..
Westland	..	..	..	..	..	..	3,282	3,282
Canterbury	..	..	..	..	6,600	13,120	..	19,720
Otago ..	..	..	..	..	..	11,622	144	11,766
Southland	..	..	..	..	..	..	..	..
Totals ..	..	..	..	..	6,600	31,032	23,223	60,855
Grand totals ..	114,124	1,363	1,982	140	9,345	43,604	166,945	337,503

* Pastoral licenses in mining district under special regulations.

Table 3 (Part I).—SUMMARY OF LANDS TAKEN UP DURING THE YEAR ENDED 31ST MARCH, 1913 (EXCLUSIVE OF PASTORAL RUNS AND MISCELLANEOUS LEASES).

For Details see	Tenures.	Auckland.	Hawke's Bay.	Taranaki.	Wellington.	Nelson.	Marlborough.	Westland.	Canterbury.	Otago.	Southland.	Total Area taken up during Year.
	Ordinary Crown Lands.	A. R. P.	A. R. P.	A. R. P.	A. R. P.	A. R. P.	A. R. P.	A. R. P.	A. R. P.	A. R. P.	A. R. P.	A. R. P.
Table	5—Cash lands	1,734 2 30	205 0 28	777 3 16	566 2 21	286 2 7	..	1 2 18	67 1 34	328 3 21	604 0 28	4,573 0 3
„	8—Occupation with right of purchase	55,332 2 26	7,975 1 0	21,212 2 13	6,131 3 7	900 0 0	314 1 10	..	..	3,912 2 28	8,987 1 8	104,766 2 12
„	10—Renewable lease	..	3,411 0 30	..	2 3 9	..	..	..	..	..	..	3,413 3 39
„	12—Mining districts land occupation leases	267 0 16	..	..	..	2 2 0	..	77 3 6	..	419 2 4	6 1 25	773 1 11
„	13—Village settlement, cash ..	..	1 0 8	..	..	..	..	..	..	..	..	1 0 8
„	13—Village settlement, renewable lease	..	..	..	81 1 38	..	..	..	..	..	..	81 1 38
„	32—Improved-farm special settlement ..	168 0 0	..	..	..	..	..	..	..	..	..	168 0 0
	Totals	57,502 1 32	11,592 2 26	21,990 1 29	6,782 2 35	1,189 0 7	314 1 10	79 1 24	67 1 34	4,661 0 13	9,597 3 21	113,777 1 31
	Cheviot Estate.											
Table	5—Cash lands	..	..	..	..	..	..	..	5 0 0	..	..	5 0 0
„	10—Renewable lease	..	..	..	..	..	..	..	633 3 29	..	..	633 3 29
	Totals	..	..	..	..	..	..	..	638 3 29	..	..	638 3 29
	Land for Settlements.											
Table	5—Cash lands	5 0 37	2 0 1	..	3 3 24	..	..	..	26 1 25	2 0 0	7 0 0	46 2 7
„	10—Renewable lease	6,236 2 10	23,315 2 6	42 3 12	34 2 19	769 0 0	14 1 7	..	94,958 3 2	3,521 3 32	2,067 3 16	130,961 1 24
	Totals	6,241 3 7	23,317 2 7	42 3 12	38 2 3	769 0 0	14 1 7	..	94,985 0 27	3,523 3 32	2,074 3 16	131,007 3 31
	National-endowment Lands.											
Table	10—Renewable lease (ordinary) ..	35,008 1 5	..	1,440 3 0	4,825 3 20	13,638 3 7	394 0 0	7,359 3 9	..	3,750 2 0	6,075 2 13	72,493 2 14
„	13—Renewable lease (village settlements)	..	..	..	..	..	..	..	..	21 1 13	..	21 1 13
„	17—Small grazing-runs	4,272 2 0	..	..	..	..	..	..	13,120 0 0	20,356 1 31	..	37,748 3 31
	Totals	39,280 3 5	..	1,440 3 0	4,825 3 20	13,638 3 7	394 0 0	7,359 3 9	13,120 0 0	24,128 1 4	6,075 2 13	110,263 3 18
	Grand totals	103,025 0 4	34,910 0 33	23,474 0 1	11,647 0 18	15,596 3 14	722 2 17	7,439 0 33	108,811 2 10	32,313 1 9	17,748 1 10	355,688 0 29

Table 3 (Part II).—SUMMARY OF LANDS SELECTED UNDER SETTLEMENT CONDITIONS: TRANSACTIONS UP TO THE 31ST MARCH, 1913.

See Table No.	Tenures.	Exchanges from other Tenures during the Year.	Renewals during the Year.	Exchanges to other Tenures during the Year.	Forfeitures during the Year.	Surrenders during the Year.	Expiries during the Year.	Total Area held on 31st March, 1913: Past and Current Transactions.	Total Area made Freehold to Date.
	Ordinary Crown Lands.	A. R. P.	A. R. P.	A. R. P.	A. R. P.	A. R. P.	A. R. P.	A. R. P.	A. R. P.
Table 5	—Cash lands	..	..	..	358 0 0	..	..	..	13,145,052 0 36
" 6	—Deferred payment	..	..	..	..	..	..	2,555 1 3	991,526 1 15
" 7	—Perpetual lease..	..	..	..	..	..	..	66,139 0 26	799,674 1 8
" 8	—Occupation with right of purchase	..	..	..	24,032 2 30	316 0 12	..	1,768,298 0 3	395,186 1 36
" 9	—Lease in perpetuity	..	..	..	3,711 3 2	1,197 3 37	..	1,423,263 1 25	87,814 3 11
" 10	—Renewable lease	..	..	..	1,771 3 8	665 0 0	..	26,716 2 13	..
" 11	—Agricultural lease	..	122 1 13	..	..	..	122 1 13	550 1 0	140,895 3 23
" 12	—Mining districts land occupation leases	..	..	579 0 14	261 2 25	254 2 21	..	23,749 0 33	..
" 13	—Village settlement, cash ..	..	..	..	..	..	..	..	7,151 0 5
" 13	—Village settlement, deferred payment	..	..	..	..	..	..	113 1 6	12,280 1 28
" 13	—Village settlement, perpetual lease	..	..	..	..	..	..	1,247 3 7	2,826 0 20
" 13	—Village settlement, occupation with right of purchase	..	..	..	0 2 15	..	..	15 0 7	12 1 24
" 13	—Village settlement, lease in perpetuity	..	..	154 2 33	..	..	..	21,589 2 22	1,080 2 8
" 13	—Village settlement, renewable lease	..	..	..	68 2 10	..	..	1,142 3 4	..
" 13	—Village settlement lease-in-perpetuity freehold, deferred payment	154 2 33	..	..	..	..	..	154 2 33	..
" 13	—Village-homestead special settlement	..	..	6 0 6	48 0 0	..	..	13,241 3 29	173 0 10
" 15	—Special-settlement associations ..	..	..	..	..	..	..	114,343 0 15	92,049 2 14
" 32	—Improved-farm special settlement	..	..	..	1,381 2 0	..	..	102,535 3 2	8,169 1 16
" 16	—Homestead	..	..	..	..	..	..	..	80,452 3 11
" 17	—Small grazing-runs	..	16,829 1 34	..	..	2,858 0 0	16,856 0 13	461,412 2 29	..
	Totals ..	154 2 33	16,951 3 7	739 3 13	31,634 2 10	5,291 2 30	16,978 1 26	4,027,068 2 17	15,764,345 1 25
	Cheviot Estate.								
Table 5	—Cash lands	..	..	..	..	..	..	..	6,848 0 25
" 9	—Lease in perpetuity	..	..	..	..	..	..	24,385 2 25	..
" 10	—Renewable lease	..	..	..	..	..	..	644 3 36	..
" 13	—Village-homestead special settlements, lease in perpetuity	..	..	..	..	..	..	2,480 1 0	..
" 17	—Grazing farms ..	..	..	..	..	..	..	45,021 1 32	..
	Totals ..	..	..	..	..	..	..	72,532 1 13	6,848 0 25

Table 3 (Part II).—SUMMARY OF LANDS SELECTED UNDER SETTLEMENT CONDITIONS: TRANSACTIONS UP TO THE 31ST MARCH, 1913—*continued*.

See Table No.	Tenures.	Exchanges from other Tenures during the Year.	Renewals during the Year.	Exchanges to other Tenures during the Year.	Forfeitures during the Year.	Surrenders during the Year.	Expiries during the Year.	Total Area held on 31st March, 1913: Past and Current Transactions.	Total Area made Freehold to Date.
	Land for Settlements.	A. R. P.	A. R. P.	A. R. P.	A. R. P.	A. R. P.	A. R. P.	A. R. P.	A. R. P.
Table 5	—Cash lands	..	..	..	..	..	..	..	499 3 39
" 9	—Lease in perpetuity	..	..	..	5 2 39	1 0 0	..	663,099 0 38	..
" 10	—Renewable lease	..	..	..	1,376 0 35	1,295 2 21	..	484,773 3 10	..
" 13	—Lease in perpetuity, village settlement	..	..	..	..	..	..	438 1 28	..
" 13	—Renewable lease, village settlement	..	..	..	..	..	..	9 3 16	..
" 15	—Special-settlement associations ..	..	..	..	..	..	..	2,114 1 9	..
" 17	—Small grazing-runs	..	..	..	..	..	..	203,322 2 15	..
	Totals	..	..	..	1,381 3 34	1,296 2 21	..	1,353,758 0 36	499 3 39
	National-endowment Lands.								
Table 10	—Renewable lease, ordinary ..	7,368 2 18	..	..	9,964 1 1	3,594 3 12	..	444,400 3 18	..
" 13	—Renewable lease, village settlement	..	..	..	0 1 0	6 1 26	..	1,455 2 38	..
" 13	—Renewable lease, village-homestead special settlement	6 0 6	..	..	..	..	..	125 2 21	..
" 12	—Mining districts land occupation leases	..	..	..	..	10 0 0	..	12 0 0	..
" 32	—Renewable lease, improved-farm special settlements	..	..	..	..	..	..	5,236 1 20	..
" 17	—Small grazing-runs	..	..	..	..	2,200 0 0	..	1,715,472 3 10	..
	Totals	7,374 2 24	..	..	9,964 2 1	5,811 0 38	..	2,166,703 1 27	..
	Grand totals	7,529 1 17	16,951 3 7	739 3 13	42,981 0 5	12,399 2 9	16,978 1 26	7,620,062 2 13	15,771,693 2 9

Table 4.—ANALYSIS OF HOLDINGS OF CROWN LANDS TAKEN UP DURING THE YEAR ENDED 31ST MARCH, 1913.

Tenures.	Number of Selectors.	Average Holdings of Selectors.					
		Number of Selectors under 1 Acre.	Number of Selectors 1 to 50 Acres.	Number of Selectors 51 to 250 Acres.	Number of Selectors 251 to 500 Acres.	Number of Selectors 501 to 1,000 Acres.	Number of Selectors 1,001 Acres and upwards.
Ordinary Crown Lands—							
Cash lands	331	169	137	22	3	..	..
Occupation with right of purchase	359	..	34	172	85	63	5
Renewable lease	16	10	..	2	..	3	1
Mining districts land occupation leases	36	..	31	5	..	..	..
Village settlement, cash	1	..	1	..	..	..	..
Village settlement, renewable lease	10	..	10	..	..	..	..
Improved-farm special settlement	3	..	1	2	..	..	..
Pastoral runs	26	..	..	1	1	..	24
Pastoral licenses in mining districts under special regulations	72	..	13	34	19	6	..
Miscellaneous leases and licenses	509	56	301	94	30	15	13
Totals	1,363	235	528	332	138	87	43
Cheviot Estate—							
Cash lands	1	..	1	..	..	..	..
Renewable ease	12	..	4	8	..	..	..
Miscellaneous	8	1	7	..	..	..	..
Totals	21	1	12	8	..	..	..
Land for Settlements—							
Cash lands	19	9	10	..	..	..	..
Renewable lease	301	35	66	91	55	33	21
Miscellaneous	35	4	24	4	1	..	2
Totals	355	48	100	95	56	33	23
National-endowment Lands—							
Renewable lease (ordinary)	237	5	24	99	67	34	8
Renewable lease (village settlement)	9	..	9	..	..	..	..
Small grazing-runs	10	..	..	..	1	..	9
Pastoral runs	7	..	..	..	..	..	7
Pastoral licenses in mining districts under special regulations	49	..	10	30	5	4	..
Miscellaneous leases and licenses	96	..	18	51	12	4	11
Totals	408	5	61	180	85	42	35
Thermal springs, Rotorua	12	8	3	..	1	..	..
Grand totals	2,159	297	704	615	280	162	101

Table 5.—RETURN OF CROWN LANDS SOLD FOR CASH DURING THE YEAR ENDED 31ST MARCH, 1913.

District.	Area disposed of.								Average Price per Acre.			Consideration received.		
	Town.		Suburban.		Rural.		Total.							
	Number of Purchasers.	Area.	Number of Purchasers.	Area.	Number of Purchasers.	Area.	Number of Purchasers.	Area.	Town.	Suburban.	Rural.	Cash.	Scrip.	Total.
Ordinary Crown Lands—		A. R. P.		A. R. P.		A. R. P.		A. R. P.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
Auckland	133	114 3 0	8	44 2 33	42	1,575 0 37	183	1,734 2 30	30 0 0	22 18 2	1 16 3 5 4 0 *	9,545 12 4	..	9,545 12 4
Hawke's Bay ..	..	..	..	..	3	205 0 28	3	205 0 28	..	..	1 11 4	169 15 0	..	169 15 0
Taranaki	17	4 2 2	4	22 2 26	8	750 2 28	29	777 3 16	85 8 9	8 18 8	2 4 7 5 2 8 *	2,585 11 5	..	2,585 11 5
Wellington	8	3 0 32	1	10 1 4	12	553 0 25	21	566 2 21	1,616 0 0	20 0 0	2 3 0 2 3 0 *	6,719 19 2	..	6,719 19 2
Nelson	5	2 2 30	..	..	9	283 3 17	14	286 2 7	21 1 2	..	1 16 4	905 1 3	..	905 1 3†
Marlborough ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Westland	9	1 2 18	..	..	..	..	9	1 2 18	579 0 0	..	..	932 0 0	..	932 0 0
Canterbury	..	..	..	..	4	67 1 34	4	67 1 34	..	..	6 6 0	425 0 6	..	425 0 6
Otago	4	1 0 20	16	17 3 38	26	309 3 3	46	328 3 21	51 2 3	4 17 3	0 17 9 1 9 9 *	577 3 7	..	577 3 7
Southland	1	0 1 6	4	21 2 26	17	582 0 36	22	604 0 28	118 5 0	2 5 0	1 7 0 5 0 0 *	1,449 15 0	..	1,449 15 0
Totals ..	177	128 0 28	33	117 1 7	121	4,327 2 8	331	4,573 0 3	..	..	..	23,309 18 3	..	23,309 18 3
Land for Settlements—														
Auckland	8	2 0 37	1	3 0 0	..	..	9	5 0 37	1,242 0 0	13 6 8	..	2,835 0 0	..	2,835 0 0
Hawke's Bay ..	..	..	..	..	1	2 0 1	1	2 0 1	..	..	5 10 0	11 0 0	..	11 0 0
Taranaki	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Wellington	..	..	..	..	2	3 3 24	2	3 3 24	..	..	14 8 0	79 1 0	..	79 1 0
Nelson	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Marlborough ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Westland	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Canterbury	..	..	..	..	4	26 1 25	4	26 1 25	..	..	11 2 10	304 3 8	..	304 3 8
Otago	..	..	..	..	1	2 0 0	1	2 0 0	..	..	3 19 0	7 8 0	..	7 8 0
Southland	..	..	..	..	2	7 0 0	2	7 0 0	..	..	4 4 3	29 10 0	..	29 10 0
Totals	8	2 0 37	1	3 0 0	10	41 1 10	19	46 2 7	..	..	..	3,266 2 8	..	3,266 2 8
Cheviot Estate—														
Canterbury	..	..	..	..	1	5 0 0	1	5 0 0	..	..	20 0 0	100 0 0	..	100 0 0
Grand totals ..	185	130 1 25	34	120 1 7	132	4,373 3 18	351	4,624 2 10	..	..	..	26,676 0 11	..	26,676 0 11

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* Where two averages are given the first is for lands when an option was given to acquire them under other tenures, and the second when no such option was given.

† Of this amount £333 7s. is balance of purchase-money on areas returned during previous years.

Table 6.—RETURN OF DEFERRED-PAYMENT LANDS (EXCLUSIVE OF VILLAGE SETTLEMENTS) AT 31ST MARCH, 1913.

District.	Forfeitures during the Year.			Exchanges during the Year.			Capitalized during the Year.			Net Area held on 31st March, 1913, including Capitalized Holdings.			Amount received during the Year ended 31st March, 1913.
	Number of Selectors.	Area.	Yearly Instalments payable.	Number of Selectors.	Area.	Yearly Instalments payable.	Number of Selectors.	Area.	Yearly Instalments payable.	Number of Selectors.	Area.	Yearly Instalments and Interest payable.	
		A. R. P.	£ s. d.		A. R. P.	£ s. d.		A. R. P.	£ s. d.		A. R. P.	£ s. d.	£ s. d.
Auckland	..	..	..	..	..	..	..	..	..	4	455 1 27	6 14 8	6 4 10
Hawke's Bay	..	..	..	..	..	..	..	..	..	..	..	..	..
Taranaki	..	..	..	..	..	..	..	..	..	..	..	..	..
Wellington	..	..	..	..	..	..	..	..	..	..	..	..	..
Nelson	..	..	..	..	..	..	..	..	..	5	622 3 18	..	..
Marlborough	..	..	..	..	..	..	..	..	..	..	..	..	..
Westland	..	..	..	..	..	..	..	..	..	..	..	..	..
Canterbury	..	..	..	..	..	..	..	..	..	1	68 2 10	1 6 2	466 16 9
Otago	..	..	..	..	..	..	1	249 0 27	13 15 8	7	1,408 1 28	21 9 0	26 18 6
Southland	..	..	..	..	..	..	..	..	..	..	..	..	..
Totals	..	..	..	..	..	..	1	249 0 27	13 15 8	17	2,555 1 3	29 9 10	500 0 1

District.	Freehold acquired during the Year.		Made Freehold from Commencement of System to 31st March, 1913.			Selectors in Arrear on 31st March, 1913.		
	Number of Selectors.	Area.	Number of Selectors.	Area.	Total Amount realized, exclusive of Interest.	Number of Selectors.	Area.	Amount.
		A. R. P.		A. R. P.	£ s. d.		A. R. P.	£ s. d.
Auckland	..	..	329	40,330 1 6	22,962 0 0	..	..	..
Hawke's Bay	..	..	808	85,321 1 20	90,496 7 9	..	..	..
Taranaki	..	..	1,304	157,189 0 3	238,795 11 3	..	..	..
Wellington	..	..	655	137,200 2 13	151,197 17 0	..	..	..
Nelson	..	..	1,592	150,467 2 7	121,504 9 10	..	..	..
Marlborough	..	..	50	4,638 1 30	3,257 9 3	..	..	..
Westland	..	..	100	4,571 3 12	4,282 11 3	..	..	..
Canterbury	2	6,168 0 0	121	27,726 0 34	60,854 3 11	..	..	..
Otago	1	249 0 27	1,129	191,216 2 7	227,301 11 9	..	..	..
Southland	..	..	1,314	192,864 2 3	254,519 4 2	..	..	..
Totals	3	6,417 0 27	7,402	991,526 1 15	1,175,171 6 2	..	..	..

Table 7.—Return of Perpetual-lease Lands (exclusive of Village-settlement and Special-settlement Lands) at 31st March, 1913.

District.	Exchanges to other Tenures during the Year.			Forfeitures during the Year.			Surrenders during the Year.			Freeholds acquired during the Year.		
	Number of Selectors.	Area.	Annual Rental.	Number of Selectors.	Area.	Annual Rental.	Number of Selectors.	Area.	Annual Rental.	Number of Selectors.	Area.	Amount realized.
		A. R. P.	£ s. d.		A. R. P.	£ s. d.		A. R. P.	£ s. d.		A. R. P.	£ s. d.
Auckland	..	..	..	..	..	..	..	..	..	8	1,080 3 31	570 5 0
Hawke's Bay	..	..	..	..	..	..	..	..	..	3	1,078 2 11	729 7 10
Taranaki	..	..	..	..	..	..	..	..	..	..	..	..
Wellington	..	..	..	..	..	..	..	..	..	1	40 0 0	60 0 0
Nelson	..	..	..	..	..	..	..	..	..	3	639 2 0	239 16 3
Marlborough	..	..	..	..	..	..	..	..	..	..	..	..
Westland	..	..	..	..	..	..	..	..	..	..	..	..
Canterbury	..	..	..	..	..	..	..	..	..	2	256 3 4	257 3 3
Otago		..	..	..	..	..	..	..	..	9	942 3 22	1,008 7 6
Southland	..	..	..	..	..	..	..	..	..	2	162 2 38	174 6 8
Totals	..	..	..	..	..	..	..	..	..	28	4,201 1 26	3,039 6 6

District.	Made Freehold from Commencement of System to 31st March, 1913.			Net Area held on 31st March, 1913.			Amount received during the Year ended 31st March, 1913 (exclusive of Amount from Perpetual Leases made Freehold).	Selectors in Arrear, 31st March, 1913.		
	Number of Selectors.	Area.	Total Amount realized, exclusive of Interest.	Number of Selectors.	Area.	Annual Rental.		Number of Selectors.	Area.	Amount.
		A. R. P.	£ s. d.		A. R. P.	£ s. d.	£ s. d.		A. R. P.	£ s. d.
Auckland	563	167,181 0 26	79,101 18 2	156	24,622 0 24	591 0 0	593 19 11	3	306 3 30	6 10 0
Hawke's Bay	302	135,023 0 22	103,375 17 5	5	1,679 1 25	67 13 0	77 13 3	..	..	..
Taranaki	406	101,938 1 29	94,750 5 2	8	3,037 0 16	151 4 2	147 18 9	2	479 0 0	16 17 7
Wellington	797	310,700 1 29	277,015 8 8	6	2,482 3 3	97 1 6	95 6 4	1	171 2 32	9 13 3
Nelson	32	10,136 2 38	3,499 6 9	5	665 3 5	13 14 6	17 6 8	..	..	..
Marlborough	9	1,698 1 28	786 1 10	6	398 0 19	16 18 6	15 5 6	..	..	..
Westland	6	482 3 20	482 17 2	7	580 1 8	28 0 4	25 15 4	1	99 0 32	2 14 2
Canterbury	96	15,995 0 32	24,231 9 3	15	1,043 1 14	91 7 0	89 3 5	..	..	..
Otago	173	32,169 2 15	25,686 4 1	145	24,674 3 25	875 0 8	837 6 5	1	97 2 32	2 16 0
Southland	107	24,348 1 9	18,400 5 6	42	6,955 1 7	250 8 10	237 6 2	..	..	..
Totals	2,491	799,674 1 8	627,329 14 0	395	66,139 0 26	2,182 8 6	2,137 1 9	8	1,154 2 6	38 11 0

Table 8.—Return of Occupation-with-right-of-purchase Lands (exclusive of Village-settlement and Improved-farm-settlement Lands) at 31st March, 1913.

District.	Taken up during the Year.			Forfeitures during the Year.			Surrenders during the Year.			Freeholds acquired during the Year.		
	Number of Selectors.	Area.	Annual Rental.	Number of Selectors.	Area.	Annual Rental.	Number of Selectors.	Area.	Annual Rental.	Number of Purchasers	Area.	Amount received.
		A. R. P.	£ s. d.		A. R. P.	£ s. d.		A. R. P.	£ s. d.		A. R. P.	£ s. d.
Auckland	182	55,332 2 26	4,983 10 4	54	17,799 1 26	800 1 8	..	..	..	122	29,727 0 29	14,632 10 0
Hawke's Bay	26	7,975 1 0	3,414 10 0	..	..	..	..	..	..	11	4,087 2 17	4,809 19 11
Taranaki	49	21,212 2 13	2,316 7 4	2	751 2 0	32 5 0	..	..	..	12	4,683 3 0	3,509 12 11
Wellington	33	6,131 3 7	704 10 8	2	1,017 0 0	96 12 6	..	..	..	29	9,607 2 29	10,101 19 11
Nelson	1	900 0 0	22 10 0	..	..	..	..	..	..	4	336 3 31	265 7 0
Marlborough	3	314 1 10	51 12 0	1	371 0 0	21 0 0	..	..	..	3	320 0 0	370 0 0
Westland	..	..	..	..	..	..	..	..	..	11	2,505 1 26	1,730 19 10
Canterbury	..	..	..	..	..	..	..	..	..	1	128 0 0	256 0 0
Otago	20	3,912 2 28	120 14 8	7	2,856 2 37	77 18 4	2	316 0 12	9 14 8	5	1,047 2 7	811 7 6
Southland	45	8,987 1 8	606 13 6	6	1,237 0 7	49 7 2	..	..	..	19	3,146 1 23	1,621 16 3
Totals	359	104,766 2 12	12,220 8 6	72	24,032 2 30	1,077 4 8	2	316 0 12	9 14 8	217	55,590 2 2	38,109 13 4

District.	Freeholds acquired from Commencement of System to 31st March, 1913.			Net Area held on 31st March, 1913.			Amount received during the Year ended 31st March, 1913 (exclusive of Amount paid for acquiring Freehold).			Selectors in Arrear, 31st March, 1913.		
	Number of Purchasers	Area.	Total Amount realized.	Number of Selectors.	Area.	Annual Rental.	On the Year's Transactions.	On Past Transactions.	Total.	Number of Selectors.	Area.	Amount.
		A. R. P.	£ s. d.		A. R. P.	£ s. d.	£ s. d.	£ s. d.	£ s. d.		A. R. P.	£ s. d.
Auckland	689	151,416 0 23	79,427 10 9	2,717	787,953 0 12	42,022 3 3	2,491 15 2	30,168 2 7	32,659 17 9	97	34,643 0 16	1,415 5 9
Hawke's Bay	114	50,479 1 5	47,751 3 5	341	162,496 2 39	19,497 6 0	1,707 5 0	15,418 7 5	17,125 12 5	10	7,045 3 18	193 8 7
Taranaki	103	37,285 2 13	37,369 15 2	478	262,731 3 15	12,730 13 1	1,158 3 8	9,138 12 3	10,296 15 11	28	4,638 1 14	365 3 9
Wellington	339	105,958 2 10	123,029 8 7	637	309,984 0 24	22,097 14 0	413 7 3	13,025 16 7	13,439 3 10	38	21,204 3 19	3,083 9 4
Nelson	68	12,246 1 38	4,814 5 0	222	65,094 0 15	1,201 12 4	16 10 0	936 18 1	953 8 1	13	3,150 2 5	70 0 11
Marlborough	22	6,120 0 11	5,737 6 9	41	12,054 3 7	655 13 5	23 11 6	545 4 5	568 15 11	..	..	..
Westland	19	3,842 0 13	2,366 10 1	87	14,748 0 11	482 6 0	..	436 9 0	436 9 0	..	..	..
Canterbury	12	1,394 1 12	1,914 18 9	23	4,548 1 32	244 19 2	..	222 9 11	222 9 11	1	152 0 0	15 10 0
Otago	37	6,104 3 4	3,627 12 5	308	55,883 2 26	1,597 10 4	96 15 0	1,269 11 4	1,366 6 4	12	2,166 2 11	25 3 5
Southland	74	20,339 0 27	10,916 6 9	472	92,803 0 22	3,308 7 2	445 15 11	2,488 2 7	2,933 18 6	1	107 0 32	5 0 0
Totals	1,477	395,186 1 36	316,954 17 8	5,326	1,768,298 0 3	103,838 4 9	6,353 3 6	73,649 14 2	80,002 17 8	200	73,108 1 35	5,173 1 9

Table 9.—RETURN OF LEASE-IN-PERPETUITY LANDS (EXCLUSIVE OF VILLAGE-SETTLEMENT, SPECIAL-SETTLEMENT, AND IMPROVED-FARM-SETTLEMENT LANDS) AT 31ST MARCH, 1913.

District.	Exchanges to Renewable Lease during the Year.			Forfeitures during the Year.			Surrenders during the Year.			Freeholds acquired during the Year.		
	Number of Selectors.	Area.	Annual Rental.	Number of Selectors.	Area.	Annual Rental.	Number of Selectors.	Area.	Annual Rental.	Number of Purchasers.	Area.	Amount realized.
		A. R. P.	£ s. d.		A. R. P.	£ s. d.		A. R. P.	£ s. d.		A. R. P.	£ s. d.
Ordinary Crown Lands—												
Auckland	..	..	..	..	..	..	..	..	..	14	2,452 0 13	2,019 10 8
Hawke's Bay	..	..	..	..	..	..	..	..	..	..	..	..
Taranaki	..	..	..	..	..	..	..	..	..	8	1,528 0 38	1,913 15 3
Wellington	..	..	..	..	..	..	..	..	..	10	3,952 0 25	3,179 11 11
Nelson ..	..	..	..	2	733 2 25	15 12 10	2	1,086 0 0	24 11 4	12	2,982 3 29	1,607 16 0
Marlborough	..	..	..	..	..	..	..	..	..	3	97 0 0	81 13 10
Westland	..	..	..	7	793 0 8	16 8 6	..	..	..	7	1,420 3 33	708 13 3
Canterbury	..	..	..	..	..	..	..	..	..	1	194 1 8	263 15 4
Otago ..	..	..	..	5	1,207 0 9	38 1 0	1	11 3 37	1 6 4	2	141 1 0	141 0 0
Southland	..	..	..	2	978 0 0	17 17 0	1	100 0 0	2 0 0	13	5,472 0 27	2,801 16 1
Totals	..	..	..	16	3,711 3 2	87 19 4	4	1,197 3 37	27 17 8	70	18,241 0 13	12,717 12 4
Land for Settlements—												
Auckland	..	..	..	1	0 1 0	2 0 0	..	..	..	..	..	..
Hawke's Bay	..	..	..	..	..	..	..	..	..	..	..	..
Taranaki	..	..	..	..	..	..	..	..	..	..	..	..
Wellington	..	..	..	1	4 3 32	7 3 10	1	1 0 0	0 10 0	..	..	..
Nelson ..	..	..	..	..	..	..	..	..	..	..	..	..
Marlborough	..	..	..	2	0 2 7	1 14 0	..	..	..	..	..	..
Westland	..	..	..	..	..	..	..	..	..	..	..	..
Canterbury	..	..	..	..	..	..	..	..	..	..	..	..
Otago ..	..	..	..	..	..	..	..	..	..	..	..	..
Southland	..	..	..	..	..	..	..	..	..	..	..	..
Totals	..	..	..	4	5 2 39	10 17 10	1	1 0 0	0 10 0	..	..	..
Grand totals	..	..	..	20	3,717 2 1	98 17 2	5	1,198 3 37	28 7 8	70	18,241 0 13	12,717 12 4

Table 9.—Return of Lease-in-perpetuity Lands (exclusive of Village-settlement, Special-settlement, and Improved-farm-settlement Lands) at 31st March, 1913—*continued*.

District.	Freeholds acquired from Commencement of System to 31st March, 1913.			Net Area held on 31st March, 1913.			Amount of Rent received during the Year ended 31st March, 1913.			Selectors in Arrear, 31st March, 1913.		
	Number of Purchasers.	Area.	Total Amount realized.	Number of Selectors.	Area.	Annual Rental.	On the Year's Transactions.	On Past Transactions.	Total.	Number of Selectors.	Area.	Amount.
Ordinary Crown Lands—		A. R. P.	£ s. d.		A. R. P.	£ s. d.	£ s. d.	£ s. d.	£ s. d.		A. R. P.	£ s. d.
Auckland	46	15,416 2 19	12,885 19 0	1,184	287,843 0 17	7,957 15 6	..	7,282 10 1	7,282 10 1	32	6,199 3 6	152 13 9
Hawke's Bay	5	1,883 1 12	3,053 11 10	204	102,375 2 36	3,869 1 2	..	3,538 17 10	3,538 17 10	..	..	..
Taranaki	13	4,743 2 38	6,678 13 0	466	173,025 2 39	7,022 2 8	..	6,380 5 6	6,380 5 6	13	5,185 0 23	119 15 1
Wellington	14	8,417 0 25	6,779 3 5	473	141,013 3 10	6,581 7 2	..	6,261 4 11	6,261 4 11	12	3,443 3 33	149 8 11
Nelson	60	22,003 1 9	10,507 7 2	474	169,450 3 24	2,982 2 8	..	2,430 18 11	2,430 18 11	25	11,296 3 38	275 1 8
Marlborough	16	5,851 1 16	3,571 3 4	324	141,224 3 18	3,361 6 2	..	2,996 0 8	2,996 0 8	2	481 1 16	14 2 8
Westland	55	13,353 1 30	6,660 11 11	398	50,629 3 5	1,265 19 10	..	1,011 7 9	1,011 7 9	9	542 1 3	22 6 11
Canterbury	2	233 1 8	387 5 4	244	75,367 1 15	4,277 13 8	..	3,823 6 10	3,823 6 10	3	105 3 8	17 17 8
Otago	6	2,606 1 16	1,201 14 6	792	196,532 3 35	5,793 17 6	..	5,260 3 6	5,260 3 6	8	1,543 0 34	16 4 6
Southland	36	13,306 0 38	9,488 11 3	336	85,799 0 26	2,162 8 8	..	2,100 6 10	2,100 6 10	..	..	..
Totals	253	87,814 3 11	61,214 0 9	4,895	1,423.263 1 25	45,273 15 0	..	41,085 2 10	41,085 2 10	104	28,798 2 1	767 11 2
Land for Settlements—												
Auckland	..	..	..	622	116,167 3 27	18,153 14 5	..	18,157 9 2	18,157 9 2	19	3,897 3 33	340 2 2
Hawke's Bay	..	..	..	426	119,717 0 39	39,084 9 2	..	35.323 3 1	35,323 3 1	9	1,642 2 5	227 5 8
Taranaki	..	..	..	37	4,017 2 15	3,241 2 8	..	3,268 11 7	3,268 11 7	2	273 1 10	75 8 11
Wellington	..	..	..	298	38,486 0 11	14,472 18 0		13,360 12 9	13,360 12 9	13	278 0 32	160 3 9
Nelson	..	..	..	13	4,097 0 9	805 4 10	..	1,062 14 8	1,062 14 8	2	2,232 0 0	47 13 3
Marlborough	..	..	..	288	54,342 2 2	12,225 10 10	..	11,172 18 5	11,172 18 5	7	1,589 2 5	111 16 4
Westland	..	..	..	28	4,987 3 26	538 5 10	..	490 0 10	490 0 10	..	..	..
Canterbury	..	..	..	1,111	164,380 1 8	59,126 9 0	..	54,213 2 0	54,213 2 0	28	2,228 2 29	637 9 10
Otago	..	..	..	535	108,688 0 18	34,296 13 6	..	32,056 1 9	32,056 1 9	6	570 3 23	142 17 1
Southland	..	..	..	237	48,214 2 3	10,634 1 2	..	9,550 0 4	9,550 0 4	6	1,673 3 31	227 18 2
Totals	..	..	..	3,595	663,099 0 38	192,578 9 5	..	178,654 14 7	178,654 14 7	92	14,387 0 8	1,970 15 2
Cheviot Estate, Canterbury ..	..	..	..	118	24,385 2 25	6,423 15 6	..	5,711 19 10	5,711 19 10	1	292 0 0	58 8 0
Grand totals ..	253	87,814 3 11	61,214 0 9	8,608	2,110,748 1 8	244,275 19 11	..	225,451 17 3	225,451 17 3	197	43,477 2 9	2,796 14 4
Ellesmere Endowment	..	..	..	68	13,937 0 0	1,399 13 2	..	1,273 17 3	1,273 17 3	..	..	..

Table 10.—Return of Renewable-lease Lands (exclusive of Village-settlement and Improved-farm settlement Lands) at 31st March, 1913.

District.	Taken up during the Year.			Exchanges from other Tenures during the Year.			Forfeitures during the Year.			Surrenders during the Year.		
	Number of Selectors.	Area.	Annual Rental.	Number of Selectors.	Area.	Annual Rental.	Number of Selectors.	Area.	Annual Rental.	Number of Selectors	Area.	Annual Rental.
		A. R. P.	£ s. d.		A. R. P.	£ s. d.		A. R. P.	£ s. d.		A. R. P.	£ s. d.
National Endowment—												
Auckland	85	35,008 1 5	1,335 13 2	12	3,760 0 19	92 18 4	24	6,217 2 34	238 4 10	..	..	..
Hawke's Bay	..	..	..	..	..	..	..	..	..	..	..	..
Taranaki	4	1,440 3 0	118 16 0	..	..	..	2	1,264 0 0	90 8 0	..	..	..
Wellington	27	4,825 3 20	464 2 4	..	..	..	..	..	..	..	..	..
Nelson	39	13,638 3 7	318 0 6	3	384 2 15	22 8 4	..	..	..	8	3,174 3 12	58 13 4
Marlborough	1	394 0 0	7 17 6	..	..	..	..	..	..	..	..	..
Westland	33	7,359 3 9	247 16 8	20	2,901 3 25	63 11 4	10	1,804 3 15	60 8 0	1	350 0 0	7 4 0
Canterbury	..	..	..	..	..	..	..	..	..	..	..	..
Otago	17	3,750 2 0	121 7 0	5	321 3 39	7 2 10	4	607 2 2	16 14 4	..	..	..
Southland	31	6,075 2 13	254 16 0	..	..	..	1	70 0 30	2 16 0	1	70 0 0	1 8 0
Totals	237	72,493 2 14	2,868 9 2	40	7,368 2 18	186 0 10	41	9,964 1 1	408 11 2	10	3,594 3 12	67 5 4
Cheviot Estate—												
Canterbury	12	633 3 29	482 0 0	..	..	..	..	..	..	..	..	..
Land for Settlements—												
Auckland	36	6,236 2 10	317 9 6	..	..	..	10	465 0 6	86 3 6	..	..	..
Hawke's Bay	39	23,315 2 6	6,775 4 0	..	..	..	1	9 2 33	22 15 10	..	..	..
Taranaki	10	42 3 12	96 15 0	..	..	..	..	..	..	..	..	..
Wellington	9	34 2 19	50 5 6	..	..	..	3	31 3 32	44 11 0	..	..	..
Nelson	1	769 0 0	36 18 10	..	..	..	..	..	..	..	..	..
Marlborough	6	14 1 7	15 1 6	..	..	..	..	..	..	..	..	..
Westland	..	..	..	..	..	..	..	..	..	..	..	..
Canterbury	162	94,958 3 2	22,853 12 4	..	..	..	8	868 3 32	535 1 0	4	859 2 21	360 9 0
Otago	27	3,521 3 32	2,646 10 0	..	..	..	..	..	..	1	436 0 0	73 7 0
Southland	11	2,067 3 16	699 19 6	..	..	..	1	0 2 12	0 18 0	..	..	..
Totals	301	130,961 1 24	33,491 16 2	..	..	..	23	1,376 0 35	689 9 4	5	1,295 2 21	433 16 0
Ordinary Crown Lands—												
Auckland	..	..	..	..	..	..	..	..	..	..	..	..
Hawke's Bay	6	3,411 0 30	732 0 0	..	..	..	..	..	..	..	..	..
Taranaki	..	..	..	..	..	..	..	..	..	..	..	..
Wellington	10	2 3 9	19 6 0	..	..	..	16	1,771 3 8	161 17 0	1	665 0 0	58 8 0
Totals	16	3,413 3 39	751 6 0	..	..	..	16	1,771 3 8	161 17 0	1	665 0 0	58 8 0
Grand totals	566	207,502 3 26	37,593 11 4	40	7,368 2 18	186 0 10	80	13,112 1 4	1,259 17 6	16	5,555 1 33	559 9 4

Table 10.—Return of Renewable-lease Lands (exclusive of Village-settlement and Improved-farm-settlement Lands) at 31st March, 1913—*continued.*

District.	Net Area held on 31st March, 1913.			Amount of Rent received during the Year ended 31st March, 1913.			Selectors in Arrear, 31st March, 1913.		
	Number of Selectors.	Area.	Annual Rental.	On the Year's Transactions.	On Past Transactions.	Total.	Number of Selectors.	Area.	Amount.
		A. R. P.	£ s. d.	£ s. d.	£ s. d.	£ s. d.		A. R. P.	£ s. d.
National Endowment—									
Auckland	392	132,218 2 26	5,289 15 6	888 1 1	2,950 13 5	3,838 14 6	19	6,623 3 23	149 10 8
Hawke's Bay	51	15,950 2 34	3,522 8 4	..	3,392 3 11	3,392 3 11	2	116 1 26	22 2 0
Taranaki	42	16,576 2 0	1,275 8 8	106 19 3	574 1 10	681 1 1	5	827 0 0	24 1 3
Wellington	45	13,574 2 31	1,174 6 2	308 12 3	608 1 4	916 13 7	1	1,668 0 0	246 0 9
Nelson	374	159,894 1 4	3,243 15 6	464 11 3	717 15 5	1,182 6 8	24	8,599 2 0	499 5 9
Marlborough	59	14,824 1 0	445 17 2	8 18 2	304 9 5	313 7 7	..	..	..
Westland	291	38,491 3 12	1,128 6 6	215 5 2	609 11 10	824 17 0	8	578 2 12	22 2 8
Canterbury	15	6,540 2 24	454 6 8	..	421 19 10	421 19 10	2	252 0 27	23 19 0
Otago	178	28,329 3 18	923 18 2	179 17 11	469 1 2	648 19 1	4	881 2 7	9 3 8
Southland	121	17,999 1 29	729 1 4	218 7 4	362 10 9	580 18 1	1	9 3 2	0 5 0
Totals	1,568	444,400 3 18	18,187 4 0	2,390 12 5	10,410 8 11	12,801 1 4	66	19,556 3 17	996 10 9
Cheviot Estate—									
Canterbury	13	644 3 36	496 1 4	574 15 2	6 13 4	581 8 6	..	..	..
Land for Settlements—									
Auckland	317	57,228 1 9	4,372 17 6	168 3 6	2,947 2 5	3,115 5 11	16	6,126 2 0	608 8 0
Hawke's Bay	211	73,986 0 20	26,518 9 10	5,359 8 6	17,914 11 2	23,273 19 8	2	350 1 5	28 2 3
Taranaki	26	481 3 34	493 4 0	74 17 0	372 3 7	447 0 7	2	76 1 4	32 4 6
Wellington	71	6,010 0 37	2,935 7 2	42 18 10	2,490 15 3	2,533 14 1	3	338 2 27	179 6 9
Nelson	22	18,641 0 0	1,267 3 0	36 17 0	642 5 9	679 2 9	11	9,097 0 0	792 16 0
Marlborough	25	205 1 30	129 13 2	11 7 10	118 8 0	129 15 10	1	85 0 0	2 5 1
Westland	..	..	..	..	..	..	..	..	..
Canterbury	458	230,712 1 37	52,385 7 5	19,689 6 1	24,043 5 6	43,732 11 7	22	2,266 2 35	1,071 13 8
Otago	181	90,892 0 9	18,362 4 8	2,314 1 6	13,522 15 0	15,836 16 6	1	1,229 0 30	31 15 0
Southland	31	6,616 0 34	1,567 13 4	473 3 4	831 14 11	1,304 18 3	1	352 0 13	27 13 6
Totals	1,342	484,773 3 10	108,032 0 1	28,170 3 7	62,883 1 7	91,053 5 2	59	19,921 2 34	2,774 4 9
Ordinary Crown Lands—									
Auckland	10	1,725 2 1	336 8 0	..	280 10 4	280 10 4	1	197 1 22	47 12 0
Hawke's Bay	6	3,411 0 30	732 0 0	483 16 4	..	483 16 4	..	..	..
Taranaki	28	16,997 2 2	889 1 4	..	1,213 9 0	1,213 9 0	4	2,635 0 0	68 0 8
Wellington	119	4,582 1 20	564 3 4	14 0 11	264 13 5	278 14 4	2	1,139 0 25	36 4 0
Totals	163	26,716 2 13	2,521 12 8	497 17 3	1,758 12 9	2,256 10 0	7	3,971 2 7	151 16 8
Grand totals	3,086	956,536 0 37	129,236 18 1	31,633 8 5	75,058 16 7	106,692 5 0	132	43,450 0 18	3,922 12 2

Table 11.—Return of Agricultural-lease Lands at 31st March, 1913.

District.	Expiries during the Year.			Net Area held on 31st March, 1913.			Amount received during the Year ended 31st March, 1913.			Made Freehold from Commencement of System to 31st March, 1913.			Selectors in Arrear on 31st March, 1913.		
	Number of Selectors.	Area.	Annual Rental.	Number of Selectors.	Area.	Annual Rental.	On the Year's Transactions.	On Past Transactions.	Total.	Number of Selectors.	Area.	Total Amount realized.	Number of Selectors.	Area.	Amount.
		A. R. P.	£ s. d.		A. R. P.	£ s. d.	£ s. d.	£ s. d.	£ s. d.		A. R. P.	£ s. d.		A. R. P.	£ s. d.
Auckland	..	..	..	..	..	..	..	..	..	67	2,750 0 0	590 5 0	..	..	..
Westland	..	..	..	..	..	..	..	..	..	32	279 0 15	488 12 11	..	..	..
Otago	2*	122 1 13	7 15 6	17	550 1 0	23 7 9	..	31 19 0	31 19 0	1,326	131,296 2 3	131,580 12 6	..	..	..
Southland	..	..	..	..	..	..	..	..	..	50	6,570 1 5	6,570 5 0	..	..	..
Totals	2	122 1 13	7 15 6	17	550 1 0	23 7 9	..	31 19 0	31 19 0	1,475	140,895 3 23	139,229 15 5	..	..	..

* These leases were again renewed during the year.

Table 12.—Return of Mining Districts Land Occupation Leases under Part VIII of the Land Act, 1908, at 31st March, 1913.

District.	Taken up during the Year.			Forfeitures and Surrenders during the Year.			Exchanges to Renewable Lease during the Year.			Net Area held on 31st March, 1913.			Amount received during the Year.			Selectors in Arrear on 31st March, 1913.		
	Number of Selectors.	Area.	Annual Rental.	Number of Selectors.	Area.	Annual Rental.	Number of Selectors.	Area.	Annual Rental.	Number of Selectors.	Area.	Annual Rental.	On the Year's Transactions.	On Past Transactions.	Total.	Number of Selectors.	Area.	Amount.
		A. R. P.	£ s. d.		A. R. P.	£ s. d.		A. R. P.	£ s. d.		A. R. P.	£ s. d.	£ s. d.	£ s. d.	£ s. d.		A. R. P.	£ s. d.
Auckland	6	267 0 16	12 18 0	5	203 1 27	11 8 4	3	250 1 0	11 10 0	203	9,986 1 11	519 13 10	6 9 0	448 0 7	454 9 7	18	835 2 25	61 8 9
Hawke's Bay	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Taranaki	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Wellington	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Nelson	1	2 2 0	0 10 0	1	10 0 0	1 10 0	1	6 3 15	0 14 0	*35	1,673 3 19	64 5 0	0 10 0	65 12 2	†66 2 2	2	126 0 5	2 19 8
Marlborough	..	..	..	..	..	..	..	..	..	5	481 0 0	16 4 4	..	14 19 4	14 19 4	1	100 0 0	1 5 0
Westland	6	77 3 6	13 0 0	2	47 0 32	2 18 6	..	..	..	82	750 3 37	120 10 0	19 10 0	86 11 3	106 1 3	2	13 2 17	1 10 0
Canterbury	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Otago	22	419 2 4	14 14 2	5	265 2 27	11 14 0	5	321 3 39	8 18 6	299	9,798 3 28	447 1 0	12 6 11	484 0 0	496 6 11	2	78 1 1	5 5 6
Southland	1	6 1 25	1 0 0	..	..	..	..	..	..	28	1,070 0 18	78 6 0	0 10 8	79 2 0	79 12 8	..	..	..
Totals	36	773 1 11	42 2 2	13	526 1 6	27 10 10	9	579 0 14	21 2 6	652	23,761 0 33	1,246 0 2	39 6 7	1,178 5 4	1,217 11 11	25	1,153 2 8	72 8 11

* Includes one selector, area 12 acres, annual rental £1, national-endowment land.

† Includes £3, receipts from national-endowment land.

Table 13.—RETURN OF VILLAGE SETTLEMENTS AT 31ST MARCH, 1913.

District.	Tenure.	Taken up during the Year.			Exchanges to other Tenures during the Year.			Made Freehold during Year.			Made Freehold from Commencement.		
		Selectors.	Area.	Annual Rental.	Selectors.	Area.	Annual Rental.	Purchasers.	Area.	Amount realized.	Purchasers.	Area.	Total Cash received.
Ordinary Crown Lands—			A. R. P.	£ s. d.		A. R. P.	£ s. d.		A. R. P.	£ s. d.		A. R. P.	£ s. d.
Auckland	Cash	..	..	..	..	..	..	..	..	..	48	50 1 2	1,015 14 0
″	Lease in perpetuity	..	..	..	..	..	..	2	6 0 15	174 15 4	13	31 2 38	846 13 10
Hawke's Bay	Cash	1	1 0 8	..	..	..	..	..	..	..	273	664 3 1	4,425 13 11
″	Deferred payment	..	..	..	..	..	..	..	..	..	110	1,192 2 2	2,706 18 1
″	Perpetual lease	..	..	..	..	..	..	..	..	..	9	146 3 1	293 18 1
″	Occupation with right of purchase	..	..	..	..	..	..	..	..	..	4	3 1 0	20 0 0
″	Lease in perpetuity	..	..	..	..	..	..	1	5 0 0	87 10 0	5	159 0 0	834 3 5
Taranaki	Cash	..	..	..	..	..	..	..	..	..	309	853 3 9	6,945 10 9
″	Deferred payment	..	..	..	..	..	..	..	..	..	120	2,289 2 36	10,907 12 11
″	Occupation with right of purchase	..	..	..	..	..	..	..	..	..	10	7 3 0	46 10 0
Wellington	Cash	..	..	..	..	..	..	..	..	..	339	501 1 33	3,950 18 5
″	Deferred payment	..	..	..	..	..	..	..	..	..	109	970 2 36	3,789 5 4
″	Perpetual lease	..	..	..	..	..	..	..	..	..	28	324 0 33	1,035 3 1
″	Lease in perpetuity	..	..	..	..	..	..	17	154 2 9	875 19 0	30	226 2 20	1,880 7 1
″	Renewable lease	10	81 1 38	53 8 0	..	..	..	..	..	..	..	..	..
″	Village-homestead special settlement	..	..	..	1	6 0 6	1 7 0	..	..	..	..	..	..
Marlborough	Cash	..	..	..	..	..	..	..	..	..	9	22 1 11	75 16 10
″	Deferred payment	..	..	..	..	..	..	..	..	..	5	43 1 20	18 15 0
Westland	Cash	..	..	..	..	..	..	..	..	..	18	14 1 21	110 0 0
″	Lease in perpetuity	..	..	..	..	..	..	..	..	..	2	70 0 20	245 8 10
Canterbury	Cash	..	..	..	..	..	..	..	..	..	166	1,208 0 1	5,481 17 4
″	Deferred payment	..	..	..	..	..	..	..	..	..	522	2,552 0 38	21,570 5 3
″	Perpetual lease	..	..	..	..	..	..	..	..	..	35	736 3 3	1,579 0 1
″	Occupation with right of purchase	..	..	..	..	..	..	1	0 1 0	8 0 0	1	0 1 0	8 0 0
″	Lease in perpetuity	..	..	..	..	..	..	3	2 1 0	91 3 9	4	3 1 0	141 3 9
″	Village-homestead special settlement	..	..	..	..	..	..	3	170 0 4	440 19 7	7	173 0 10	580 18 4
Otago	Cash	..	..	..	..	..	..	..	..	..	103	889 2 19	1,756 3 5
″	Deferred payment	..	..	..	..	..	..	1	50 0 0	32 11 4	104	1,180 0 38	2,941 1 11
″	Perpetual lease	..	..	..	..	..	..	1	25 2 25	71 10 0	27	701 2 35	1,489 10 0
″	Lease in perpetuity	..	..	..	..	..	..	1	0 2 5	15 0 0	6	56 2 1	345 15 0
Southland	Cash	..	..	..	..	..	..	..	..	..	579	2,946 1 28	9,230 10 3
″	Deferred payment	..	..	..	..	..	..	..	..	..	272	4,051 2 18	9,680 6 7
″	Perpetual lease	..	..	..	..	..	..	3	38 0 15	90 0 0	62	916 2 28	2,270 4 11
″	Occupation with right of purchase	..	..	..	..	..	..	..	..	..	2	1 0 24	23 0 0
″	Lease in perpetuity	..	..	..	6	154 2 33	14 2 8	21	278 0 26	1,169 14 6	42	533 1 9	2,652 11 3
	Totals	11	82 2 6	53 8 0	7	160 2 39	15 9 8	54	730 2 19	3,057 3 6	3,373	23,523 2 15	98,898 17 8
Land for Settlements—													
Hawke's Bay	Cash	..	..	..	..	..	..	..	..	..	3	1 1 32	31 5 0
National-endowment Lands—													
Otago	Renewable lease	9	21 1 13	14 16 0	..	..	..	..	..	..	..	..	..
	Grand totals	20	103 3 19	68 4 0	7	160 2 39	15 9 8	54	730 2 19	3,057 3 6	3,376	23,525 0 7	98,930 2 8

Table 13.—Return of Village Settlements at 31st March, 1913—*continued*.

District.	Tenure.	Rent and other Payments received during the Year.	Forfeitures during the Year.			Surrenders during the Year.			Net Area held on 31st March, 1913.			Arrears on 31st March, 1913.		
			Selectors.	Area.	Annual Rental.	Selectors.	Area.	Annual Rental.	Selectors.	Area.	Total Annual Rental.	Selectors.	Area.	Amount.
Ordinary Crown	*Lands*—	£ s. d.		A. R. P.	£ s. d.		A. R. P.	£ s. d.		A. R. P.	£ s. d.		A. R. P.	£ s. d.
Auckland ..	Lease in perpetuity made freehold ..	174 15 4	..	..	..	..	..	..	..	..	..	..	..	..
" ..	Lease in perpetuity	176 7 4	..	..	..	..	..	..	51	2,632 2 13	153 4 4	5	302 2 3	13 15 2
" ..	Village-homestead special settlement	102 14 1	1	48 0 0	1 10 0	..	..	..	25	940 1 32	60 10 2	2	72 0 0	1 10 1
Hawke's Bay ..	Cash	25 0 0	..	..	..	..	..	..	..	..	..	..	..	..
" ..	Lease in perpetuity made freehold ..	87 10 0	..	..	..	..	..	..	..	..	..	..	..	..
" ..	Occupation with right of purchase ..	2 17 0	1	0 2 15	1 0 0	..	..	..	7	4 3 27	5 4 0	1	0 2 29	0 12 6
" ..	Lease in perpetuity	1,781 1 0	..	..	..	..	..	..	78	3,684 3 16	1,933 16 0	3	159 3 13	27 0 7
" ..	Village-homestead special settlement	55 10 9	..	..	..	..	..	..	29	187 0 32	34 10 0	..	..	..
Taranaki ..	Occupation with right of purchase ..	1 13 0	..	..	..	..	..	..	5	4 2 0	1 7 0	..	..	..
" ..	Lease in perpetuity	9 6 2	..	..	..	..	..	..	10	69 0 8	10 5 8	..	..	..
Wellington ..	Lease in perpetuity made freehold ..	875 19 0	..	..	..	..	..	..	..	..	..	..	..	..
" ..	Lease in perpetuity	1,956 19 5	..	..	..	..	..	..	485	9,466 2 34	1,824 10 10	12	116 3 25	25 9 8
" ..	Renewable lease	548 12 0	8	68 2 10	32 15 10	..	..	..	156	1,142 3 4	590 10 8	9	45 0 12	20 1 4
" ..	Village-homestead special settlement	91 17 0	..	..	..	..	..	..	164	2,153 0 5	305 10 4	9	94 2 30	23 13 10
Marlborough ..	Perpetual lease	1 5 0	..	..	..	..	..	..	1	10 0 0	1 5 0	..	..	..
" ..	Lease in perpetuity	20 7 2	..	..	..	..	..	..	11	153 0 35	22 3 4	..	..	..
" ..	Village-homestead special settlement	10 0 8	..	..	..	..	..	..	8	58 0 19	7 16 0	1	6 1 7	0 9 0
Westland ..	Lease in perpetuity	8 7 10	..	..	..	..	..	..	10	128 1 37	12 3 2	2	40 3 2	1 3 5
Canterbury ..	Occupation with right of purchase made freehold	8 0 0	..	..	..	..	..	..	..	..	..	..	..	..
" ..	Lease in perpetuity made freehold ..	91 3 9	..	..	..	..	..	..	..	..	..	..	..	..
" ..	Village-homestead special settlement, lease in perpetuity made freehold	440 19 7	..	..	..	..	..	..	..	..	..	..	..	..
" ..	Deferred payment	15 19 1	..	..	..	..	..	..	6	63 1 6	15 5 0	1	5 0 0	0 18 8
" ..	Perpetual lease	42 8 4	..	..	..	..	..	..	12	185 2 7	41 13 10	2	3 0 12	1 4 0
" ..	Occupation with right of purchase ..	3 15 6	..	..	..	..	..	..	7	2 1 0	3 16 6	..	..	..
" ..	Lease in perpetuity	6 13 8	..	..	..	..	..	..	14	5 1 0	5 2 6	..	..	..
" ..	Village-homestead special settlement	863 8 10	..	..	..	..	..	..	252	8,372 1 39	927 15 0	11	287 1 14	31 0 7
Otago ..	Perpetual lease made freehold ..	71 10 0	..	..	..	..	..	..	..	..	..	..	..	..
" ..	Lease in perpetuity made freehold ..	15 0 0	..	..	..	..	..	..	..	..	..	..	..	..
" ..	Deferred payment	33 6 11	..	..	..	..	..	..	1	50 0 0	1 12 6	..	..	..
" ..	Perpetual lease	18 0 5	..	..	..	..	..	..	11	199 2 12	16 4 8	..	..	..
" ..	Occupation with right of purchase ..	0 4 6	..	..	..	..	..	..	2	1 1 20	0 6 0	..	..	..
" ..	Lease in perpetuity	133 10 10	..	..	..	..	..	..	102	1,625 2 30	139 2 4	..	..	..
" ..	Village-homestead special settlement	127 19 3	..	..	..	..	..	..	69	1,006 2 28	127 13 6	1	12 0 9	1 10 5
Southland ..	Perpetual lease made freehold ..	90 0 0	..	..	..	..	..	..	..	..	..	..	..	..
" ..	Lease in perpetuity made freehold ..	1,169 14 6	..	..	..	..	..	..	..	..	..	..	..	..
" ..	Lease in perpetuity freeholds (deferred payment)	53 11 7	..	..	..	..	..	..	6	154 2 33	30 16 4	..	..	..
" ..	Perpetual lease	101 1 8	..	..	..	..	..	..	61	852 2 28	109 16 0	..	..	..
" ..	Occupation with right of purchase ..	0 10 0	..	..	..	..	..	..	2	2 0 0	0 10 0	..	..	..
" ..	Lease in perpetuity	368 0 5	..	..	..	..	..	..	248	3,823 3 9	386 12 6	1	10 0 0	1 0 0
" ..	Village-homestead special settlement	120 14 9	..	..	..	..	..	..	46	523 3 34	115 19 2	..	..	..
	Totals	9,705 16 4	10	117 0 25	35 5 10	..	..	..	1,879	37,505 0 28	6,885 2 4	60	1,156 0 36	149 9 3

Table 13.—Return of Village Settlements at 31st March, 1913—*continued.*

District.	Tenure.	Rent and other Payments received during the Year.	Forfeitures during the Year.			Surrenders during the Year.			Net Area held on 31st March, 1913.			Arrears on 31st March, 1913.		
			Selectors.	Area.	Annual Rental.	Selectors.	Area.	Annual Rental.	Selectors.	Area.	Total Annual Rental.	Selectors.	Area.	Amount.
		£ s. d.		A. R. P.	£ s. d.		A. R. P.	£ s. d.		A. R. P.	£ s. d.		A. R. P.	£ s. d.
Cheviot Estate—														
Canterbury ..	Lease in perpetuity	767 4 8	..	..	..	..	..	..	92	2,480 1 0	870 10 4	6	50 0 0	22 18 8
Land for Settlements—														
Hawke's Bay ..	Lease in perpetuity	27 14 6	..	..	..	..	..	..	16	34 3 0	32 15 0	1	0 1 23	0 4 0
〃 ..	Renewable lease	0 10 2	..	..	..	..	..	..	2	0 2 0	2 5 0	..	..	..
Otago ..	Lease in perpetuity	277 0 5	..	..	..	..	..	..	30	403 2 28	309 12 8	1	8 0 9	4 3 9
〃 ..	Renewable lease	6 17 10	..	..	..	..	..	..	1	9 1 16	7 13 0	..	..	..
	Totals	312 2 11	..	..	..	..	..	..	49	448 1 4	352 5 8	2	8 1 32	4 7 9
National-endowment Lands—														
Auckland ..	Renewable lease	65 13 10	..	..	..	..	..	..	32	156 1 35	88 12 0	..	..	..
Hawke's Bay ..	〃	27 12 11	..	..	..	1	6 1 26	6 0 0	7	48 1 20	42 12 0	..	..	..
Wellington ..	〃	167 14 2	..	..	..	..	..	..	9	375 2 28	207 9 4	..	..	..
〃 ..	Village-homestead special settlement	8 4 10	..	..	..	..	..	..	12	125 2 21	15 13 1	..	..	..
Marlborough ..	Renewable lease	45 11 6	..	..	..	..	..	..	29	243 3 12	47 16 0	..	..	..
Westland ..	〃	6 12 4	1	0 1 0	1 4 0	..	..	..	6	1 1 30	7 4 0	..	..	..
Otago ..	〃	14 3 6	..	..	..	..	..	..	16	94 2 14	18 14 0	..	..	..
Southland ..	〃	32 1 10	..	..	..	..	..	..	32	535 1 19	39 9 2	..	..	..
	Totals	367 14 11	1	0 1 0	1 4 0	1	6 1 26	6 0 0	143	1,581 1 19	467 9 7	..	..	..
	Grand totals	11,152 18 10	11	117 1 25	36 9 10	1	6 1 26	6 0 0	2,163	42,015 0 11	8,575 7 11	68	1,214 2 28	176 15 8

Table 14.—Summary of Position of Village Settlements at 31st March, 1913.

District.	Number of Settlers in Occupation.		Area occupied.	Area laid down in Pasture or cultivated.	Annual Rental or Instalments, including Interest on Advances.	Amounts advanced to Settlers up to 31st March, 1913.			Amount of Advances which have been repaid to 31st March, 1913.	Total Amount of Interest paid to 31st March, 1913.	Value of Improvements now on the Land.	Arrears of Interest on 31st March. 1913.
	Resident.	Non-resident.				For Houses.	For Bushfelling, Grassing, &c.	Total.				
Ordinary Crown Lands—			A. R. P.	A. R. P.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
Auckland	59	17	3,573 0 5	3,021 2 0	213 14 6	958 0 0	1,253 17 6	2,211 17 6	1,954 17 0	3,268 2 3	24,780 10 0	13 15 2
Hawke's Bay	77	37	3,876 3 35	2,610 0 0	1,994 19 2	580 0 0	296 15 9	876 15 9	427 17 0	757 12 10	25,817 15 0	..
Taranaki..	10	5	73 2 8	73 2 8	11 12 8	..	..	..	..	..	892 0 0	..
Wellington	652*	153	12,762 2 3	10,289 0 0	2,735 14 3	3,068 7 6	3,670 19 11	6,739 7 5	6,436 19 9	462 0 0	119,541 0 0	12 14 8
Marlborough	12	8	221 1 14	172 0 0	34 7 0	85 0 0	18 15 0	103 15 0	15 0 0	105 16 4	2,499 6 0	..
Westland	10	..	128 1 37	128 1 37	12 3 2	..	..	..	..	..	2,195 0 0	..
Canterbury	204	87	8,628 3 12	8,386 1 37	993 12 10	2,460 0 0	..	2,460 0 0	1,290 0 0	2,269 0 1	36,080 1 0	..
Otago	80	105	2,883 1 10	2,028 1 0	284 19 0	1,101 5 0	440 0 0	1,541 5 0	432 17 6	1,344 10 6	16,946 0 0	0 19 5
Southland	353	10	5,357 0 24	5,034 0 0	643 14 0	756 0 0	350 2 2	1,106 2 2	352 10 0	1,127 17 5	32,739 0 0	..
Totals	1,457	422	37,505 0 28	31,743 1 2	6,924 16 7	9,008 12 6	6,030 10 4	15,039 2 10	10,910 1 3	9,334 19 5	261,490 12 0	27 9 3
Cheviot Estate—												
Canterbury	46	46	2,480 1 0	2,434 2 6	870 10 4	120 0 0	..	120 0 0	120 0 0	26 0 0	14,457 0 0	..
Land for Settlements—												
Hawke's Bay	10	8	35 1 0	34 0 0	35 0 0	..	..	..	..	..	482 10 0	..
Otago	18	13	413 0 4	403 0 0	317 5 8	..	..	..	..	..	4,382 0 0	..
Totals	28	21	448 1 4	437 0 0	352 5 8	..	..	..	..	..	4,864 10 0	..
National-endowment Lands—												
Auckland	26	6	156 1 35	55 0 32	88 12 0	..	..	..	..	..	3,908 0 0	..
Hawke's Bay	3	4	48 1 20	40 1 0	42 12 0	..	..	..	..	..	830 0 0	..
Wellington	17	4	501 1 9	300 0 0	223 2 5	..	..	..	..	..	2,800 0 0	..
Marlborough	13	16	243 3 12	240 0 0	47 16 0	..	..	..	..	..	3,488 14 0	..
Westland	3	3	1 1 30	1 1 30	7 4 0	..	..	..	..	..	620 0 0	..
Otago	1	15	94 2 14	24 2 0	18 14 0	..	..	..	..	..	138 6 0	..
Southland	24	8	535 1 19	150 0 0	39 9 2	..	..	..	..	..	850 0 0	..
Totals	87	56	1,581 1 19	811 1 22	467 9 7	..	..	..	..	..	12,635 0 0	..
Grand totals ..	1,618	545	42,015 0 11	35,426 0 30	8,615 2 2	9,128 12 6	6,030 10 4	15,159 2 10	11,030 1 3	9,360 19 5	293,447 2 0	27 9 3

* Includes ninety-two holdings not reported on.

Table 15.—Return of Special-settlement Associations at 31st March, 1913.

District.	Taken up during the Year.			Amount of Rent received during the Year.	Total Amount received on Current and Previous Transactions to 31st March, 1913.	Made Freehold				Number of Selectors required to reside and actually residing, and Area.		
						During the Year.		From Commencement of System to 31st March, 1913.				
										Number required to reside.	Actually residing.	
	Number of Selectors.	Area.	Capital Value per Acre.			No.	Area.	No.	Area.		Number.	Area.
Ordinary Crown Lands—		A. R. P.	£ s. d.	£ s. d.	£ s. d.		A. R. P.		A. R. P.			A. R. P.
Auckland	..	..	..	284 7 8	10,529 19 5	1	100 0 0	52	5,208 0 25	12	12	2,487 0 0
Hawke's Bay	..	..	..	74 5 8	1,329 14 8	..	..	54	4,809 3 12	..	2	400 0 0
Taranaki	..	..	..	720 10 5	15,172 18 10	2	400 0 0	2	400 0 0	..	..	..
Wellington	..	..	..	4,320 13 8	174,913 7 5	1	300 0 0	817	81,631 2 17	226	235	53,829 0 0
Nelson ..	..	..	..	..	..	..	..	..	..	..	..	..
Marlborough	..	..	..	..	..	..	..	..	..	..	..	..
Westland	..	..	..	..	..	..	..	..	..	..	..	..
Canterbury	..	..	..	135 15 0	2,845 6 0	..	..	..	..	..	..	..
Otago ..	..	..	..	111 1 1	2,120 7 11	..	..	..	..	..	10	1,980 0 36
Southland	..	..	..	..	..	..	..	..	..	..	..	..
Totals	..	..	..	5,646 13 6	206,911 14 3	4	800 0 0	925	92,049 2 14	238	259	58,696 0 36
Land for Settlements—												
Canterbury	..	..	..	138 17 2	2,700 5 2	..	..	..	..	..	..	..
Grand totals	..	..	..	5,785 10 8	209,611 19 5	4	800 0 0	925	92,049 2 14	238	259	58,696 0 36

District.	Forfeitures during the Year.			Surrenders during the Year.			Net Area held on 31st March, 1913.			Selectors in Arrear on 31st March, 1913.		
	Number of Selectors.	Area.	Annual Rental.	Number of Selectors.	Area.	Annual Rental.	Number of Selectors.	Area.	Annual Rental.	Number of Selectors.	Area.	Amount.
Ordinary Crown Lands—		A. R. P.	£ s. d.		A. R. P.	£ s. d.		A. R. P.	£ s. d.		A. R. P.	£ s. d.
Auckland	..	..	..	..	..	..	67	10,970 2 18	319 14 2	1	200 0 0	2 10 0
Hawke's Bay	..	..	..	..	..	..	14	2,800 0 0	103 8 2	..	..	..
Taranaki	..	..	..	..	..	..	86	15,801 1 30	847 18 3	6	1,093 2 3	40 15 4
Wellington	..	..	..	..	..	..	448	79,469 0 18	4,643 5 8	11	2,278 2 0	95 4 10
Nelson..	..	..	..	..	..	..	..	..	..	..	..	..
Marlborough	..	..	..	..	..	..	..	..	..	..	..	..
Westland	..	..	..	..	..	..	..	..	..	..	..	..
Canterbury	..	..	..	..	..	..	30	2,536 2 17	141 13 8	1	100 0 0	7 10 0
Otago ..	..	..	..	..	..	..	14	2,765 1 12	121 2 4	..	..	..
Southland	..	..	..	..	..	..	..	..	..	..	..	..
Totals	..	..	..	..	..	..	659	114,343 0 15	6,177 2 3	19	3,672 0 3	146 0 2
Land for Settlements—												
Canterbury	..	..	..	..	..	..	11	2,114 1 9	162 7 8	..	..	..
Grand totals	..	..	..	..	..	..	670	116,457 1 24	6,339 9 11	19	3,672 0 3	146 0 2

Table 16.—RETURN OF HOMESTEAD LANDS AT 31ST MARCH, 1913.

District.	Surrenders during the Year.		Forfeitures during the Year.		Net Area held on 31st March, 1913.		Made Freehold during the Year.		Made Freehold since Commencement of System to 31st March, 1913.	
	Number of Selectors.	Area.	Number of Selectors.	Area.	Number of Selectors.	Area.	Number of Selectors.	Area.	Number of Selectors.	Area.
		A. R. P.		A. R. P.		A. R. P.		A. R. P.		A. R. P.
Auckland	..	..	..	..	..	..	..	..	464	76,096 3 10
Westland	..	..	..	..	..	..	..	..	39	1,480 0 0
Otago	..	..	..	..	..	..	..	..	22	2,876 0 1
Totals	..	..	..	..	..	..	..	..	525	80,452 3 11

Table 17.—RETURN OF SMALL GRAZING-RUNS AT 31ST MARCH, 1913.

District.	Taken up during the Year.			Expiries during the Year.			Renewal of Leases during the Year.			Forfeitures during the Year.			Surrenders during the Year.			Exchanges to other Tenures during the Year.		
	Number of Selectors.	Area.	Annual Rental.	Number.	Area.	Annual Rental.	Number.	Area.	Annual Rental.	Number.	Area.	Annual Rental.	Number.	Area.	Annual Rental.	Number.	Area.	Annual Rental.
Ordinary Crown Lands—		A. R. P.	£ s. d.		A. R. P.	£ s. d.		A. R. P.	£ s. d.		A. R. P.	£ s. d.		A. R. P.	£ s. d.		A. R. P.	£ s. d.
Auckland	..	..	..	1	8,540 0 0	53 7 6	1	8,524 3 21	138 15 6	..	..	..	..	..	..	..	..	..
Taranaki	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Wellington	..	..	..	1	2,284 0 0	9 6 8	1	2,284 0 0	11 8 6	..	..	..	1	2,858 0 0	160 15 4	..	..	..
Marlborough	..	..	..	3	2,566 3 31	32 11 10	3	2,555 1 31	53 5 8	..	..	..	..	..	..	..	..	..
Canterbury	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Otago	..	..	..	4	3,465 0 22	111 13 6	4	3,465 0 22	116 7 4	..	..	..	..	..	..	..	..	..
Totals	..	..	..	9	16,856 0 13	206 19 6	9	16,829 1 34	319 17 0	..	..	..	1	2,858 0 0	160 15 4	..	..	..
Cheviot Estate—																		
Canterbury	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Land for Settlements—																		
Canterbury	..	..	..		..	..	..	..	..	..	..	..	..	..	..	..	..	..
National Endowment—																		
Auckland	2	4,272 2 0	107 0 0	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Canterbury	2	13,120 0 0	425 0 0	..	..	..	..	..	..	..	..	..	1	2,200 0 0	110 0 0	..	..	..
Otago	6	20,356 1 31	637 5 0	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Totals	10	37,748 3 31	1,169 5 0	..	..	..	..	..	..	..	..	..	1	2,200 0 0	110 0 0	..	..	..
Grand totals ..	10	37,748 3 31	1,169 5 0	9	16,856 0 13	206 19 6	9	16,829 1 34	319 17 0	..	..	..	2	5,058 0 0	270 15 4	..	..	..

Table 17.—RETURN OF SMALL GRAZING-RUNS AT 31ST MARCH, 1913—*continued.*

District.	Net Area held on 31st March, 1913.			Amount received during the Year.			Arrears on 31st March, 1913.		
	Number of Selectors.	Area.	Annual Rental.	On the Year's Transactions.	On Past Transactions.	Total.	Number of Selectors.	Area.	Amount.
		A. R. P.	£ s. d.	£ s. d.	£ s. d.	£ s. d.		A. R. P.	£ s. d.
Ordinary Crown Lands—									
Auckland	5	26,364 3 21	707 10 6	53 10 0	485 16 9	539 6 9	..	..	..
Hawke's Bay	48	115,509 0 8	7,840 15 8	..	7,987 12 3	7,987 12 3	1	4,330 0 0	68 0 0
Taranaki	6	5,749 2 10	91 14 8	..	130 14 11	130 14 11	..	..	..
Wellington	79	69,632 1 1	3,807 19 8	..	3,241 11 4	3,241 11 4	7	5,530 0 31	309 17 7
Nelson	..	..	..	..	..	..	..	..	..
Marlborough	9	5,193 1 31	119 3 0	35 10 0	90 13 4	126 3 4	..	..	..
Westland	..	..	..	..	..	..	..	..	..
Canterbury	20	41,766 3 21	2,969 2 4	..	2,788 10 11	2,788 10 11	5	10,929 0 0	638 17 6
Otago	85	197,196 2 17	5,422 2 2	..	6,706 8 7	6,706 8 7	..	..	..
Southland	..	..	..	..	..	..	..	..	..
Totals	252	461,412 2 29	20,958 8 0	89 0 0	21,431 8 1	21,520 8 1	13	20,789 0 31	1,016 15 1
Cheviot Estate—									
Canterbury	34	45,021 1 32	6,424 3 2	..	5,245 10 10	5,245 10 10	23	33,842 2 0	2,879 19 6
Land for Settlements—									
Auckland	5	23,492 1 0	198 3 10	..	222 0 1	222 0 1	..	..	..
Hawke's Bay	16	19,662 2 17	4,437 17 6	..	3,537 8 8	3,537 8 8	..	..	..
Taranaki	..	..	..	..	..	..	..	..	..
Wellington	7	9,127 0 0	1,795 5 4	..	1,907 13 0	1,907 13 0	..	..	..
Nelson	..	..	..	..	..	..	..	..	..
Marlborough	31	54,849 1 2	7,515 10 0	..	6,830 2 7	6,830 2 7	3	4,895 3 16	427 13 2
Westland	..	..	..	..	..	..	..	..	..
Canterbury	44	82,430 0 15	10,946 8 6	..	11,370 0 3	11,370 0 3	1	99 0 19	8 6 11
Otago	10	10,953 0 21	1,615 0 6	..	1,422 17 8	1,422 17 8	..	..	..
Southland	2	2,808 1 0	201 7 4	..	90 18 8	90 18 8	1	1,658 1 0	62 3 8
Totals	115	203,322 2 15	26,709 13 0	..	25,381 0 11	25,381 0 11	5	6,653 0 35	498 3 9
National-endowment Lands—									
Auckland	15	55,075 2 0	465 12 4	..	252 9 2	252 9 2	2	7,608 0 0	31 8 8
Hawke's Bay	49	160,946 1 8	2,727 6 6	..	2,105 15 10	2,105 15 10	3	7,085 0 0	104 9 3
Taranaki	4	4,906 0 0	74 15 2	..	57 19 2	57 19 2	..	..	..
Wellington	9	8,610 3 0	275 6 2	..	381 14 8	381 14 8	..	..	..
Nelson	9	16,757 3 18	109 1 10	..	65 13 6	65 13 6	..	..	..
Marlborough	75	213,470 1 22	3,042 10 5	..	2,825 14 4	2,825 14 4	12	29,907 0 0	319 12 10
Westland	..	..	..	..	..	..	..	..	..
Canterbury	48	197,017 3 38	6,213 8 8	212 10 0	4,393 8 3	4,605 18 3	5	30,955 2 0	405 12 1
Otago	284	992,137 1 31	18,701 12 4	272 5 0	17,164 6 4	17,436 11 4	..	..	..
Southland	20	66,550 2 13	762 10 2	..	776 3 8	776 3 8	2	2,246 3 20	17 11 6
Totals	513	1,715,472 3 10	32,372 3 7	484 15 0	28,023 4 11	28,507 19 11	24	77,802 1 20	878 14 4
Grand totals	914	2,425,229 2 6	86,464 7 9	573 15 0	80,081 4 9	80,654 19 9	65	139,087 1 6	5,273 12 8

Table 18.—Return of Pastoral Licenses at 31st March, 1913.

District.	Taken up during the Year.			Exchanges to other Tenures during the Year.		Forfeitures during the Year.		Expiries during the Year.		Surrenders during the Year.	
	Number of Selectors.	Area.	Annual Rental.	Number of Selectors.	Area.	Number. of Selectors.	Area.	Number of Selectors.	Area.	Number of Selectors.	Area.
Pastoral Runs.											
Ordinary Crown Lands—		A. R. P.	£ s. d.		A. R. P.		A. R. P.		A. R. P.		A. R. P.
Auckland..	1	11,595 0 0	25 0 0	..	..	2	29,903 0 0	..	..	..	..
Hawke's Bay	..	..	..	..	..	..	..	..	..	..	..
Taranaki..	..	..	..	..	..	..	..	..	..	..	..
Wellington	..	..	..	..	..	..	..	..	..	..	..
Nelson ..	..	..	..	..	..	..	..	..	..	..	..
Marlborough	1	1,590 0 0	87 10 0	..	..	..	..	..	..	1	1,590 0 0
Westland	12	178,332 0 0	113 14 4	..	..	1	100 0 0	4	31,882 0 0	4	64,700 0 0
Canterbury	1	445 1 0	155 0 0	..	..	..	..	6	2,799 1 0	..	..
Otago ..	9	99,236 0 24	1,270 4 0	..	..	1	462 1 29	23	191,539 1 0	2	7,254 1 23
Southland	2	6,723 0 0	137 0 0	..	..	..	..	2	6,723 0 0	..	..
Totals	26	297,921 1 24	1,788 8 4	..	..	4	30,465 1 29	35	232,943 2 0	7	73,544 1 23
National-endowment Lands—											
Auckland	..	..	..	..	..	1	56,508 0 0	..	..	..	..
Hawke's Bay	..	..	..	..	..	..	..	..	..	..	..
Taranaki..	..	..	..	..	..	..	..	..	..	..	..
Wellington	..	..	..	..	..	..	..	..	..	..	..
Nelson ..	..	..	..	..	..	..	..	..	..	..	..
Marlborough	..	..	..	..	..	..	..	..	..	..	..
Westland	5	30,950 0 0	31 15 8	..	..	..	..	7	31,680 0 0	..	..
Canterbury	1	6,600 0 0	100 0 0	..	..	..	..	..	..	8	128,470 0 0
Otago ..	..	..	..	..	..	..	..	2	7,957 0 0	..	..
Southland	1	55,690 0 0	10 0 0	..	..	..	..	1	55,690 0 0	..	..
Totals	7	93,240 0 0	141 15 8	..	..	1	56,508 0 0	10	95,327 0 0	8	128,470 0 0
Grand totals	33	391,161 1 24	1,930 4 0	..	..	5	86,973 1 29	45	328,270 2 0	15	202,014 1 23
Pastoral Licenses in Mining Districts under Special Regulations.											
Ordinary Crown Lands—											
Auckland	46	14,601 1 21	367 12 10	8	3,085 1 34	4	1,944 1 30	..	..	..	..
Nelson ..	18	2,871 2 10	74 19 6	1	77 3 0	..	..	..	..	2	120 1 0
Westland	8	1,110 2 15	27 0 0	10	1,108 3 25	..	..	..	..	..	..
Totals	72	18,583 2 6	469 12 4	19	4,272 0 19	4	1,944 1 30	..	..	2	120 1 0
National-endowment Lands—											
Auckland	1	150 0 0	3 15 0	1	424 1 25	2	290 0 0	..	..	..	..
Nelson ..	25	5,777 2 12	149 6 6	1	300 0 0	..	..	..	..	3	930 0 0
Westland	23	4,095 0 0	84 6 0	10	1,793 0 0	..	..	..	..	1	103 0 0
Totals	49	10,022 2 12	237 7 6	12	2,517 1 25	2	290 0 0	..	..	4	1,033 0 0
Grand totals	121	28,606 0 18	706 19 10	31	6,789 2 4	6	2,234 1 30	..	..	6	1,153 1 0

Table 18.—Return of Pastoral Licenses at 31st March, 1913—*continued.*

District.	Net Area held on 31st March, 1913.				Rent paid during the Year.	Selectors in Arrear on 31st March, 1913.		
	Number of Selectors.	Area, approximately.	Average Holdings.	Annual Rental.		Number.	Area.	Amount.
Pastoral Runs.								
		A. R. P.	A. R. P.	£ s. d.	£ s. d.		A. R. P.	£ s. d.
Ordinary Crown Lands—								
Auckland	15	80,149 0 5	5,343 1 3	221 3 0	178 17 6	3	1,322 0 0	12 10 0
Hawke's Bay	12	63,428 2 0	5,285 2 33	887 6 6	780 11 6	..	..	..
Wellington	4	100,813 0 0	25,203 1 0	1,814 14 4	1,815 16 4	..	..	..
Nelson..	2	165,829 0 0	82,914 2 0	330 0 0	165 0 0	..	..	..
Marlborough	32	586,259 0 0	18,320 2 15	3,194 13 4	3,222 8 4	..	..	..
Westland	62	967,207 0 0	15,600 0 18	605 15 6	596 13 2	2	25,738 0 0	5 15 0
Canterbury	76	2,006,003 1 36	26,394 3 5	17,229 4 6	17,645 18 8	..	..	..
Otago ..	173	2,323,857 2 31	13,432 2 32	15,063 5 10	14,478 2 3	..	..	..
Southland	65	687,437 0 0	10,576 3 20	2,766 15 8	2,730 15 6	..	..	..
Totals ..	441	6,980,983 2 32	15,829 3 5	42,112 18 8	41,614 3 3	5	27,060 0 0	18 5 0
Cheviot Estate—								
Canterbury	1	1,642 0 0	1,642 0 0	193 3 8	193 3 9	..	..	..
Land for Settlements—								
Canterbury	..	725 0 0	725 0 0	41 18 0	41 18 0	..	..	..
Otago ..	4	1,014 3 13	253 2 33	132 18 0	132 18 0	..	..	..
Totals ..	4	1,739 3 13	..	174 16 0	174 16 0	..	..	..
National-endowment Lands—								
Auckland	10	112,935 0 0	11,293 2 0	175 3 5	127 14 3	3	42,516 0 0	46 5 0
Hawke's Bay	1	186 0 0	186 0 0	12 0 0	6 0 0	..	..	..
Wellington	18	32,890 0 16	1,827 0 36	1,018 0 0	859 19 0	..	..	..
Nelson	1	10,000 0 0	10,000 0 0	34 0 0	..	1	10,000 0 0	51 0 0
Marlborough	15	311,140 0 0	20,742 2 27	1,379 13 4	1,344 3 4	..	..	..
Westland	19	221,428 0 0	11,654 0 17	231 16 4	228 2 10	..	..	..
Canterbury	51	1,110,324 0 0	21,771 0 9	18,888 12 2	20,003 2 1	..	..	..
Otago ..	56	1,355,676 2 21	24,208 2 1	10,530 0 0	10,528 10 6	..	..	..
Southland	28	669,070 0 0	23,895 2 34	2,114 17 0	1,932 13 10	..	..	..
Totals ..	199	3,823,649 2 37	19,214 1 11	34,384 2 3	35,030 5 10	4	52,516 0 0	97 5 0
Grand totals	645	10,808,015 1 2	16,756 2 14	76,865 0 7	77,012 8 10	9	79,576 0 0	115 10 0
Pastoral Licenses in Mining Districts under Special Regulations.								
Ordinary Crown Lands—								
Auckland	201	62,067 1 12	308 3 6	1,424 15 0	670 6 4	29	12,924 1 39	177 5 2
Nelson..	134	24,572 2 1	183 1 20	517 14 0	505 0 1	21	4,350 0 29	96 2 11
Westland	73	9,952 3 4	136 1 14	222 8 4	187 19 4	8	1,186 0 0	15 10 9
Totals ..	408	96,592 2 17	236 2 39	2,164 17 4	1,363 5 9	58	18,460 2 28	288 18 10
National-endowment Lands—								
Auckland	37	6,887 1 5	186 0 23	148 5 4	109 13 0	1	200 0 0	2 1 8
Nelson..	115	26,925 2 24	234 0 21	700 18 8	381 14 10	22	9,477 3 1	138 7 3
Westland	142	22,708 0 22	159 3 27	445 0 6	356 3 4	4	1,201 0 0	13 11 4
Totals ..	294	56,521 0 11	192 1 0	1,294 4 6	847 11 2	27	10,878 3 1	154 0 3
Grand totals	702	153,113 2 28	218 0 18	3,459 1 10	2,210 16 11	85	29,339 1 29	442 19 1

Table 19.—RETURN OF MISCELLANEOUS LEASES AND LICENSES NOT OTHERWISE ENUMERATED AT 31st MARCH, 1913.

District.	Objects for which leased.												Total Area leased during the Year.	Total Amount received during the Year. *	Total Area in Occupation on 31st March, 1913.			Lessees in Arrear on 31st March, 1913.		
	Coal and Mineral.			Timber-cutting, &c.			Flax-cutting.			Miscellaneous.										
	Number.	Area.	Annual Rental.	Number.	Area.	Total Amount received.	Number.	Area.	Total Amount received.	Number.	Area.	Annual Rental.			Number.	Area.	Annual Rental.	Number.	Area	Amount.
Ordinary Crown Lands—		A. R. P.	£ s. d.		A. R. P.	£ s. d.		A. R. P.	£ s. d.		A. R. P.	£ s. d.	A. R. P.	£ s. d.		A. R. P.	£ s. d.		A. R. P.	£ s. d.
Auckland ..	..	..	..	..	..	13,532 5 6	..	..	106 17 6	67	8,519 3 18	297 4 8	8,519 3 18	17,682 2 3	323	65,192 0 8	3,028 17 10	36	7,006 3 30	218 9 1
Hawke's Bay ..	..	..	..	..	..	129 12 0	..	..	..	27	31,956 0 13	2,016 5 3	31,956 0 13	2,728 15 7	133	44,426 2 8	3,525 18 4	6	133 0 12	75 13 7
Taranaki ..	..	..	..	2	2,159 0 0	105 5 0	..	..	..	16	211 0 19	32 0 6	2,370 0 19	665 16 6	181	4,351 1 18	555 16 2	18	459 1 11	51 12 9
Wellington ..	..	..	..	..	..	8,487 9 6	..	..	..	53	2,231 1 3	452 17 0	2,231 1 3	10,787 12 8	423	65,998 3 18	1,957 19 3	24	91 3 12	60 17 0
Nelson ..	..	..	..	..	..	829 2 10	..	..	27 2 6	28	3,725 2 37	41 16 0	3,725 2 37	1,710 16 0	364	125,991 2 21	1,185 9 0	42	34,071 0 24	344 9 9
Marlborough ..	..	..	..	4	736 0 0	3,913 19 8	1	80 0 0	15 0 0	23	406 1 2	22 4 0	1,222 1 2	5,286 12 8	204	42,332 3 28	1,523 14 4	5	1,332 3 12	74 12 7
Westland ..	1	2,390 0 0	249 7 2	..	..	64 18 6	6	3,978 0 0	35 0 0	86	11,979 3 27	143 0 0	18,347 3 27	1,308 3 7	515	92,340 3 38	1,241 12 10	21	2,894 3 12	36 17 4
Canterbury ..	..	..	..	1	50 0 0	417 4 7	..	..	..	40	30,005 0 10	382 19 8	30,055 0 10	3,749 4 8	711	114,182 1 1	3,905 3 1	52	2,923 1 23	258 16 4
Otago ..	..	..	..	11	2,830 2 0	307 11 1	..	..	13 0 0	75	2,397 3 7	121 7 11	5,228 1 7	2,579 15 10	939	81,395 0 8	1,302 3 0	7	528 3 34	0 8 9
Southland ..	..	..	..	..	..	3,101 7 7	..	..	19 10 0	68	7,268 1 25	172 7 6	7,268 1 25	4,358 6 2	499	32,783 2 31	1,075 3 8	..	..	..
Totals ..	1	2,390 0 0	249 7 2	18	5,775 2 0	30,888 16 3	7	4,058 0 0	216 10 0	483	98,701 2 1	3,682 2 6	110,925 0 1	50,857 5 11	4,292	668,995 1 19	19,301 17 6	211	49,442 1 10	1.121 17 2
Cheviot Estate—																				
Canterbury ..	..	..	..	..	..	..	..	..	..	8	95 2 18	56 9 10	95 2 18	251 4 3	52	1,181 2 8	250 12 8	5	171 1 36	41 17 6
Land for Settlements—																				
Auckland ..	..	..	..	..	..	..	..	..	..	10	636 2 11	99 6 0	636 2 11	234 16 8	40	1,724 0 27	232 9 6	1	6 0 0	0 10 0
Hawke's Bay ..	..	..	..	..	..	..	..	..	..	1	5 0 0	0 15 0	5 0 0	209 19 8	15	492 3 38	291 13 4	..	..	..
Taranaki ..	..	..	..	..	..	..	..	..	..	..	..	..	..	26 15 0	2	2 3 27	3 17 6	..	..	..
Wellington ..	..	..	..	..	..	..	..	..	..	2	71 0 0	251 10 0	71 0 0	1,172 11 4	13	1,290 1 33	474 3 8	..	..	..
Marlborough ..	..	..	..	..	..	..	..	..	..	10	3,169 0 25	55 12 6	3,169 0 25	581 14 5	42	3,686 3 28	272 6 3	1	5 0 0	2 10 0
Westland ..	..	..	..	..	..	..	..	..	..	..	..	..	..	1 6 8	3	34 3 29	2 5 0	..	..	..
Canterbury ..	..	..	..	..	..	..	..	..	..	9	500 3 25	231 1 0	500 3 25	385 14 0	53	1,440 0 6	492 7 10	3	26 2 0	9 13 6
Otago ..	..	..	..	..	..	4 7 6	..	..	..	2	126 2 34	66 10 0	126 2 34	1,502 2 2	87	2,470 0 36	440 6 6	1	15 0 0	1 17 5
Southland ..	..	..	..	..	..	..	..	..	250 0 0	1	1 0 20	0 5 0	1 0 20	274 5 5	11	91 2 28	22 10 2	..	..	..
Totals ..	..	..	..	..	..	4 7 6	..	..	250 0 0	35	4,510 1 35	704 19 6	4,510 1 35	4,389 5 4	266	11,234 1 12	2,231 19 9	6	52 2 0	14 10 11
National-endowment Lands—																				
Auckland ..	..	..	..	..	..	6,359 11 2	..	..	..	3	544 0 0	69 3 0	544 0 0	6,392 9 6	6	10,003 1 4	101 15 4	..	..	..
Hawke's Bay ..	..	..	..	..	..	..	..	..	..	..	..	..	..	16 4 0	1	28,540 0 0	15 0 0	..	..	..
Taranaki ..	..	..	..	..	..	..	..	..	..	1	4 2 5	0 10 0	4 2 5	0 15 0	3	304 2 5	10 10 0	..	..	..
Wellington ..	..	..	..	..	..	..	..	..	..	1	350 0 0	35 0 0	350 0 0	65 0 0	6	4,042 0 16	162 15 0	2	40 0 16	10 0 0
Nelson ..	..	..	..	..	..	1,123 6 9	..	..	..	9	5,602 2 5	25 10 0	5,602 2 5	1,451 5 9	201	59,400 0 38	840 5 10	28	7,088 3 26	174 15 3
Westland ..	9	54,295 0 0	332 11 8	..	..	10,207 14 6	1	940 0 0	73 10 10	65	12,364 3 0	126 0 0	67,599 3 0	11,111 12 7	357	159,261 0 23	966 0 11	8	1,369 0 0	15 3 4
Canterbury ..	..	..	..	..	..	..	..	..	..	1	2,200 0 0	120 0 0	2,200 0 0	40 0 0	..	..	..	1	2,200 0 0	30 0 0
Otago ..	..	..	..	..	..	..	..	..	..	6	1,079 3 4	43 14 3	1,079 3 4	189 16 4	19	16,183 0 24	201 5 6	..	..	..
Totals ..	9	54,295 0 0	332 11 8	..	..	17,690 12 5	1	940 0 0	73 10 10	86	22,145 2 14	419 17 3	77,380 2 14	19,267 3 2	593	277,734 1 30	2,297 12 7	39	10,698 0 2	229 18 7
Grand totals ..	10	56,685 0 0	581 18 10	18	5,775 2 0	48,583 16 2	8	4,998 0 0	540 0 10	612	125,453 0 28	4,863 9 1	192,911 2 28	74.764 18 8	5,203	959,145 2 29	24,082 2 6	261	60,364 1 8	1,408 4 2

* Includes coal and timber royalties and receipt from State forests.

Table 20.—Return of Gross Revenue received during the Year ended 31st March, 1913.

System.	Auckland.	Hawke's Bay.	Taranaki.	Wellington.	Nelson.	Marlborough.	Westland.	Canterbury.	Otago.	Southland.	Totals.
Ordinary Crown Lands.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
Cash lands	9,545 12 4	169 15 0	2,585 11 5	6,719 19 2	905 1 3	..	932 0 0	425 0 6	577 3 7	1,449 15 0	23,309 18 3
Perpetual lease made freehold	570 5 0	729 7 10	..	60 0 0	239 16 3	..	..	257 3 3	1,008 7 6	174 6 8	3,039 6 6
Occupation with right of purchase made freehold	14,632 10 0	4,809 19 11	3,509 12 11	10,101 19 11	265 7 0	370 0 0	1,730 19 10	256 0 0	811 7 6	1,621 16 3	38,109 13 4
Lease in perpetuity made freehold	2,019 10 8	..	1,913 15 3	3,179 11 11	1,607 16 0	81 13 10	708 13 3	263 15 4	141 0 0	2,801 16 1	12,717 12 4
Village settlement, perpetual lease made freehold	..	..	..	..	..	..	..	..	71 10 0	90 0 0	161 10 0
Village settlement, occupation with right of purchase made freehold	..	..	..	..	..	..	..	8 0 0	..	..	8 0 0
Village settlement, lease in perpetuity made freehold	174 15 4	87 10 0	..	875 19 0	..	..	..	91 3 9	15 0 0	1,169 14 6	2,414 2 7
Village-homestead special settlement, lease in perpetuity made freehold	..	..	..	..	..	..	..	440 19 7	..	..	440 19 7
Special-settlement associations, lease in perpetuity made freehold	200 0 0	..	835 12 2	675 0 0	..	..	..	..	..	..	1,710 12 2
Improved-farm special settlement, occupation with right of purchase made freehold	125 2 9	..	..	1,372 11 5	..	..	..	..	..	185 11 9	1,683 5 11
Improved-farm special settlement, lease in perpetuity made freehold	..	..	108 7 4	141 0 5	..	..	..	..	..	..	249 7 9
Deferred payment, rural	6 4 10	..	..	..	..	..	..	1 4 11	26 18 6	..	34 8 3
Deferred payment, pastoral	..	..	..	..	..	..	..	465 11 10	..	..	465 11 10
Perpetual lease and small areas	593 19 11	77 13 3	147 18 9	95 6 4	17 6 8	15 5 6	25 15 4	89 3 5	837 6 5	237 6 2	2,137 1 9
Occupation with right of purchase	32,659 17 9	17,125 12 5	10,296 15 11	13,439 3 10	953 8 1	568 15 11	436 9 0	222 9 11	1,366 6 4	2,933 18 6	80,002 17 8
Lease in perpetuity	7,282 10 1	3,538 17 10	6,380 5 6	6,261 4 11	2,430 18 11	2,996 0 8	1,011 7 9	3,823 6 10	5,260 3 6	2,100 6 10	41,085 2 10
Renewable lease	280 10 4	483 16 4	1,213 9 0	278 14 4	..	..	..	..	..	..	2,256 10 0
Agricultural lease	..	..	..	..	..	..	..	..	31 19 0	..	31 19 0
Mining districts land occupation leases ..	454 9 7	..	..	..	63 2 2	14 19 4	106 1 3	..	496 6 11	79 12 8	1,214 11 11
Village settlement, cash	..	25 0 0	..	..	..	..	..	..	..	..	25 0 0
Village settlement, deferred payment	..	..	..	..	..	..	..	15 19 1	33 6 11	..	49 6 0
Village settlement, perpetual lease	..	..	..	..	..	1 5 0	..	42 8 4	18 0 5	101 1 8	162 15 5
Village settlement, occupation with right of purchase	..	2 17 0	1 13 0	..	..	..	..	3 15 6	0 4 6	0 10 0	9 0 0
Village settlement, lease in perpetuity ..	176 7 4	1,781 1 0	9 6 2	1,956 19 5	..	20 7 2	8 7 10	6 13 8	133 10 10	368 0 5	4,460 13 10
Village-settlement lease-in-perpetuity freeholds, deferred payment	..	..	..	..	..	..	..	..	..	53 11 7	53 11 7
Village settlement, renewable lease	..	..	..	548 12 0	..	..	..	..	..	..	548 12 0
Village-homestead special settlement	102 14 1	55 10 9	..	91 17 0	..	10 0 8	..	863 8 10	127 19 3	120 14 9	1,372 5 4
Special-settlement association, perpetual lease ..	..	..	..	..	..	..	..	48 4 0	..	..	48 4 0
Special-settlement association, lease in perpetuity	284 7 8	74 5 8	720 10 5	4,320 13 8	..	..	..	87 11 0	111 1 1	..	5,598 9 6
Improved-farm special settlement, occupation with right of purchase	1,187 11 8	19 11 10	1,388 19 2	1,755 16 1	..	..	..	..	..	132 17 10	4,484 16 7
Improved-farm special settlement, lease in perpetuity	47 4 6	212 12 9	2,135 5 8	463 5 0	..	..	..	..	..	137 5 11	2,995 13 10
Improved-farm special settlement, renewable lease	..	..	196 0 9	..	..	..	..	..	..	..	196 0 9
Small grazing-runs	539 6 9	7,987 12 3	130 14 11	3,241 11 4	..	126 3 4	..	2,788 10 11	6,706 8 7	..	21,520 8 1
Pastoral runs	178 17 6	780 11 6	..	1,815 16 4	165 0 0	3,222 8 4	596 13 2	17,645 18 8	14,478 2 3	2,730 15 6	41,614 3 3
Pastoral licenses in mining districts under special regulations	670 6 4	..	..	..	505 0 1	..	187 19 4	..	..	..	1,363 5 9
Coal and mineral leases	692 15 10	..	..	..	285 1 6	..	445 12 2	82 9 6	826 5 3	238 3 3	2,570 7 6
Carried forward	72,425 0 3	37,961 15 4	31,573 18 4	57,395 2 1	7,437 17 11	7,426 19 9	6,189 18 11	27,928 18 10	33,078 8 4	16,727 5 4	298,145 5 1

Table 20.—Return of Gross Revenue received during the Year ended 31st March, 1913—*continued.*

System.	Auckland.	Hawke's Bay.	Taranaki.	Wellington.	Nelson.	Marlborough.	Westland.	Canterbury.	Otago.	Southland.	Totals.
Ordinary Crown Lands—continued.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
Brought forward	72,425 0 3	37,961 15 4	31,573 18 4	57,395 2 1	7,437 17 11	7,426 19 9	6,189 18 11	27,928 18 10	33,078 8 4	16,727 5 4	298,145 5 1
Timber licenses and other leases, and sale of timber	7,763 0 3	129 12 0	99 0 3	7,788 13 6	829 2 10	547 15 0	64 18 6	123 6 11	180 1 10	1,760 6 5	19,285 17 6
Flax-cutting	106 17 6	..	..	..	27 2 6	15 0 0	35 0 0	..	13 0 0	19 10 0	216 10 0
Miscellaneous leases and licenses	3,112 18 9	2,064 5 0	80 17 7	1,591 12 11	371 9 5	163 18 9	590 12 8	..	1,225 5 4	910 2 4	10,111 2 9
Transfer, lease, and license fees, &c.	887 13 6	167 10 0	211 7 0	180 14 6	171 0 0	69 14 0	320 3 0	222 18 0	277 19 6	287 18 0	2,796 17 6
Rents of reserves	237 4 8	534 18 7	479 13 11	708 10 3	197 19 9	1,193 14 3	172 0 3	3,249 10 7	207 14 2	89 3 0	7,070 9 5
Miscellaneous	2,436 14 8	255 19 11	3,756 14 5	5,721 11 8	193 6 4	346 4 10	37 7 0	609 17 5	1,128 1 5	360 5 9	14,846 3 5
Crown-grant fees	364 4 10	26 5 11	52 16 5	106 14 5	65 15 9	8 1 5	29 10 7	34 11 1	62 6 3	96 2 10	846 9 6
State forests	5,769 5 3	..	6 4 9	698 16 0	..	3,366 4 8	..	293 17 8	127 9 3	1,341 1 2	11,602 18 9
Survey liens on Native lands	21,248 7 4	1,889 3 10	..	1,713 7 2	269 13 7	..	..	..	..	..	25,120 11 11
Survey fees which do not form part payment of land	120 2 10	..	..	..	128 2 0	..	..	68 9 0	207 16 4	30 18 0	555 8 2
Survey fees which do form part payment of land	..	..	12 0 0	..	..	..	..	..	65 10 1	..	77 10 1
Payments of capital value under section 191 of the Land Act, 1908	..	..	..	407 10 11	40 0 0	..	..	..	..	..	447 10 11
Totals	114,471 9 10	43,029 10 7	36,272 12 8	76,312 13 5	9,731 10 1	13,137 12 8	7,439 10 11	32,531 9 6	36,573 12 6	21,622 12 10	391,122 15 0
Land for Settlements.											
Cash lands	2,835 0 0	11 0 0	..	79 1 0	..	..	..	304 3 8	7 8 0	29 10 0	3,266 2 8
Lease in perpetuity	18,157 9 2	35,323 3 1	3,268 11 7	13,360 12 9	1,062 14 8	11,172 18 5	490 0 10	54,213 2 0	32,056 1 9	9,550 0 4	178,654 14 7
Renewable lease	3,115 5 11	23,273 19 8	447 0 7	2,533 14 1	679 2 9	129 15 10	..	43,732 11 7	15,836 16 6	1,304 18 3	91,053 5 2
Lease in perpetuity, village settlement ..	..	27 14 6	..	..	..	..	..	..	277 0 5	..	304 14 11
Renewable lease, village settlement	..	0 10 2	..	..	..	..	..	..	6 17 10	..	7 8 0
Special-settlement associations, lease in perpetuity	..	..	..	..	..	..	..	138 17 2	..	..	138 17 2
Small grazing-runs	222 0 1	3,537 8 8	..	1,907 13 0	..	6,830 2 7	..	11,370 0 3	1,422 17 8	90 18 8	25,381 0 11
Pastoral runs	..	..	..	..	..	..	..	41 18 0	132 18 0	..	174 16 0
Miscellaneous	234 16 8	1,385 11 11	26 15 0	1,999 18 3	..	581 14 5	1 6 8	599 6 2	1,502 2 2	601 11 11	6,933 3 2
Payments of capital value under section 191 of the Land Act, 1908	31 10 0	..	..	..	..	..	..	300 0 0	..	..	331 10 0
Totals	24,596 1 10	63,559 8 0	3,742 7 2	19,880 19 1	1,741 17 5	18,714 11 3	491 7 6	110,699 18 10	51,242 2 4	11,576 19 2	306,245 12 7
Cheviot Estate.											
Cash lands	..	..	..	..	..	..	..	100 0 0	..	..	100 0 0
Lease in perpetuity	..	..	..	..	..	..	..	5,711 19 10	..	..	5,711 19 10
Renewable lease	..	..	..	..	..	..	..	581 8 6	..	..	581 8 6
Village homesteads	..	..	..	..	..	..	..	767 4 8	..	..	767 4 8
Grazing farms	..	..	..	..	..	..	..	5,245 10 10	..	..	5,245 10 10
Pastoral runs	..	..	..	..	..	..	..	193 3 9	..	..	193 3 9
Miscellaneous leases	..	..	..	..	..	..	..	251 4 3	..	..	251 4 3
Totals	..	..	..	..	..	..	..	12,850 11 10	..	..	12,850 11 10
Carried forward	139,067 11 8	106,588 18 7	40,014 19 10	96,193 12 6	11,473 7 6	31,852 3 11	7,930 18 5	156,082 0 2	87,815 14 10	33,199 12 0	710,218 19 5

Table 20.—Return of Gross Revenue received during the Year ended 31st March, 1913—*continued*.

System.	Auckland.	Hawke's Bay.	Taranaki.	Wellington.	Nelson.	Marlborough.	Westland.	Canterbury.	Otago.	Southland.	Totals.
	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
Brought forward	139,067 11 8	106,588 18 7	40,014 19 10	96,193 12 6	11,473 7 6	31,852 3 11	7,930 18 5	156,082 0 2	87,815 14 10	33,199 12 0	710,218 19 5
National-endowment Lands.											
Renewable lease, ordinary	3,838 14 6	3,392 3 11	681 1 1	916 13 7	1,182 6 8	313 7 7	824 17 0	421 19 10	648 19 1	580 18 1	12,801 1 4
Renewable lease, village settlement	65 13 10	27 12 11	..	167 14 2	..	45 11 6	6 12 4	..	14 3 6	32 1 10	359 10 1
Renewable lease, village-homestead special settlement	..	..	..	8 4 10	..	..	..	..	..	..	8 4 10
Renewable lease, improved-farm special settlement	..	..	256 14 11	..	..	..	..	..	..	..	256 14 11
Mining districts land occupation leases ..	..	..	..	..	3 0 0	..	..	..	..	..	3 0 0
Small grazing-runs	252 9 2	2,105 15 10	57 19 2	381 14 8	65 13 6	2,825 14 4	..	4,605 18 3	17,436 11 4	776 3 8	28,507 19 11
Pastoral runs	127 14 3	6 0 0	..	859 19 0	..	1,344 3 4	228 2 10	20,003 2 1	10,528 10 6	1,932 13 10	35,030 5 10
Pastoral licenses in mining districts under special regulations	109 13 0	..	..	..	381 14 10	..	356 3 4	..	..	..	847 11 2
Coal and mineral leases	..	..	..	..	121 13 6	..	308 16 8	..	..	..	430 10 2
Timber licenses and sale of timber	6,359 11 2	..	..	..	1,123 6 9	..	10,207 14 6	..	..	..	17,690 12 5
Flax-cutting	..	..	..	..	..	..	73 10 10	..	..	..	73 10 10
Miscellaneous	32 18 4	16 4 0	0 15 0	65 0 0	206 5 6	..	521 10 7	40 0 0	189 16 4	..	1,072 9 9
Totals	10,786 14 3	5,547 16 8	996 10 2	2,399 6 3	3,084 0 9	4,528 16 9	12,527 8 1	25,071 0 2	28,818 0 9	3,321 17 5	97,081 11 3
Thermal Springs Districts Act: Rents	2,131 14 3	..	..	..	..	..	..	..	..	..	2,131 14 3
Primary-education endowments	3,611 16 2	6,797 3 7	5,604 4 1	9,134 5 4	404 0 1	440 2 10	205 11 9	19,343 3 6	3,300 18 9	14,182 12 8	63,023 18 9
Secondary-education endowments	1,138 16 11	1,781 16 1	824 16 7	3,083 16 1	131 2 11	74 8 6	133 9 2	135 0 0	791 14 4	279 3 11	8,374 4 6
Other endowment lands	210 13 8	437 16 7	812 3 10	287 11 5	19,009 4 4	..	1,089 10 9	1,625 10 1	5,819 2 8	1,906 15 8	31,198 9 0
Grand totals	156,947 6 11	121,153 11 6	48,252 14 6	111,098 11 7	34,101 15 7	36,895 12 0	21,886 18 2	202,256 13 11	126,545 11 4	52,890 1 8	912,028 17 2

Table 21.—Return of Lands alienated under Acts without Money Payment, or reserved by the Crown for Public Purposes.

District.	During the Year ended 31st March, 1913.			Total Area granted under Acts without Money Payment, or reserved for Public Purposes from Foundation of Dominion to 31st March, 1913.
	Crown Lands set apart for various Public Purposes.	Area granted under Special Acts.	Total Area thus alienated during the Year.	
	Acres.	Acres.	Acres.	Acres.
Auckland	1,453	195	1,648	3,633,866
Hawke's Bay	46	..	46	436,520
Taranaki	41	..	41	715,659
Wellington	2,474	..	2,474	906,353
Nelson	697	..	697	307,863
Marlborough	24,064	..	24,064	237,563
Westland	109	..	109	257,526
Canterbury	2,795	..	2,795	1,364,864
Otago	1,318	..	1,318	590,268
Southland	24,160	..	24,160	3,550,233
Totals	57,157	195	57,352	12,000,715

Table 22.—FORFEITURES AND SURRENDERS DURING THE YEAR ENDED 31ST MARCH, 1913, SHOWING UNDER EACH TENURE THE NUMBER OF SELECTORS WHO HAVE FORFEITED AND SURRENDERED THEIR HOLDINGS, AND THE AREA AND RENTAL OF SUCH HOLDINGS.

Tenure.	Forfeitures.			Surrenders.		
	Number.	Area.	Annual Rental.	Number.	Area.	Annual Rental.
Ordinary Crown Lands—		A. R. P.	£ s. d.		A. R. P.	£ s. d.
Cash lands	1	358 0 0	..	..	..	..
Occupation with right of purchase	72	24,032 2 30	1,077 4 8	2	316 0 12	9 14 8
Lease in perpetuity	16	3,711 3 2	87 19 4	4	1,197 3 37	27 17 8
Renewable lease	16	1,771 3 8	161 17 0	1	665 0 0	58 8 0
Mining districts occupation leases	8	261 2 25	14 17 10	4	254 2 21	11 3 0
Village settlements—						
Occupation with right of purchase	1	0 2 15	1 0 0	..	..	..
Renewable lease	8	68 2 10	32 15 10	..	..	..
Homestead special settlement	1	48 0 0	1 10 0	..	..	..
Improved-farm special settlements	8*	1,381 2 0	52 7 0	..	..	..
Small grazing-runs	..	..	..	1	2,858 0 0	160 15 4
Pastoral runs	4	30,465 1 29	53 18 0	7	73,544 1 23	610 0 0
Pastoral licenses in mining districts under special regulations	4	1,944 1 30	37 9 2	2	120 1 0	3 0 2
Miscellaneous	44	4,778 0 35	178 4 0	24	5,668 2 6	253 10 8
Totals	183	68,822 2 24	1,699 2 10	45	84,624 3 19	1,134 9 6
Land for Settlements—						
Lease in perpetuity	4	5 2 39	10 17 10	1	1 0 0	0 10 0
Renewable lease	23	1,376 0 35	689 9 4	5	1,295 2 21	433 16 0
Miscellaneous	1	10 0 0	0 10 0	2	12 1 0	9 5 0
Totals	28	1,391 3 34	700 17 2	8	1,308 3 21	443 11 0
National-endowment Lands—						
Renewable lease, ordinary ..	41	9,964 1 1	408 11 2	10	3,594 3 12	67 5 4
Renewable lease, village settlement	1	0 1 0	1 4 0	1	6 1 26	6 0 0
Mining districts occupation leases	..	..	..	1	10 0 0	1 10 0
Small grazing-runs	..	..	..	1	2,200 0 0	110 0 0
Pastoral runs	1	56,508 0 0	56 0 0	8	128,470 0 0	3,490 0 0
Pastoral licenses in mining districts under special regulations	2	290 0 0	6 9 2	4	1,033 0 0	46 14 0
Miscellaneous	14	1,347 0 11	42 1 0	5	719 2 0	7 0 0
Totals	59	68,109 2 12	514 5 4	30	136,033 2 38	3,728 9 4
Thermal springs	1	0 1 0	4 10 0	..	..	..
Grand totals	271	138,324 1 30	2,918 15 4	83	221,967 1 38	5,306 9 10
Primary-education endowments ..	18	601 0 10	60 8 6	5	609 0 0	28 2 2
Secondary-education endowments	1	1 0 8	2 0 0	..	..	..

* Includes five unregistered holdings of 950 acres 2 roods on which no rent was payable.

Table 23.—RETURN OF LAND TAKEN UP WITHIN THE THERMAL SPRINGS DISTRICT OF AUCKLAND AT 31ST MARCH, 1913.

Locality.	Taken up during the Year.			Net Area held on 31st March, 1913.			Amount received during the Year.	Selectors in Arrear on 31st March, 1913.		
	Number of Selectors.	Area.	Annual Rental.	Number of Selectors.	Area.	Annual Rental.		Number of Selectors.	Area.	Amount.
		A. R. P.	£ s. d.		A. R. P.	£ s. d.	£ s. d.		A. R. P.	£ s. d.
Rotorua ..	12	557 3 33	116 5 0	331	4,057 1 33	2,252 15 6	2,131 14 3	25	59 1 17	138 12 3

Table 24.—RETURN SHOWING PAYMENTS OF CAPITAL VALUE UNDER SECTION 191 OF THE LAND ACT, 1908, AS AT 31ST MARCH, 1913.

Tenure.	Transactions during the Year.			Tenants whose Deposits in the Aggregate are under 33 per Cent. of Capital Value.					Tenants whose Deposits aggregate 33 or more per Cent. of Capital Value.					Totals.				
	Number of New Depositors.	Area held.	Amount deposited.	Number of Tenants.	Net Area held.	Original Annual Rental payable.	Total Payments made on Account of Capital Value.	Annual Rental now payable as reduced by such Payments.	Number of Tenants.	Net Area held.	Original Annual Rental payable.	Total Payments made on Account of Capital Value.	Annual Rental now payable as reduced by such Payments.	Number of Tenants.	Net Area held.	Original Annual Rental payable.	Total Payments made on Account of Capital Value.	Annual Rental now payable as reduced by such Payments.
		A. R. P.	£ s. d.		A. R. P.	£ s. d.	£ s. d.	£ s. d.		A. R. P.	£ s. d.	£ s. d.	£ s. d.		A. R. P.	£ s. d.	£ s. d.	£ s. d.
Ordinary Crown Lands.																		
Lease in perpetuity, ordinary ..	3	658 1 0	276 5 8	..	..	..	..	..	11	2,737 2 9	78 10 3	1,103 6 0	43 17 0	11	2,737 2 9	78 10 3	1,103 6 0	43 17 0
Lease in perpetuity, village settlement	2	81 3 5	74 7 0	..	..	..	..	..	5	111 3 24	10 10 5	138 9 6	6 9 5	5	111 3 24	10 10 5	138 9 6	6 9 5
Lease in perpetuity, special-settlement associations	..	..	..	..	..	..	..	..	2	302 0 0	15 2 0	125 16 8	10 1 4	2	302 0 0	15 2 0	125 16 8	10 1 4
Lease in perpetuity, improved farms..	1	82 2 8	75 6 3	..	..	..	..	..	1	82 2 8	4 10 5	75 6 3	3 0 3	1	82 2 8	4 10 5	75 6 3	3 0 3
Renewable lease	1	0 3 7	21 12 0	..	..	..	..	..	2	1 0 7	5 4 0	52 5 4	3 2 7	2	1 0 7	5 4 0	52 5 4	3 2 7
Totals	7	823 1 20	447 10 11	..	..	..	..	..	21	3,235 0 8	113 17 1	1,495 3 9	66 10 7	21	3,235 0 8	113 17 1	1,495 3 9	66 10 7
Land for Settlements.																		
Lease in perpetuity	..	..	*300 0 0	..	..	..	..	..	6	629 3 8	386 10 2	4,181 15 8	178 8 4	6	629 3 8	386 10 2	4,181 15 8	178 8 4
Renewable lease	1	0 1 0	31 10 0	..	..	..	..	..	2	814 2 27	17 15 6	151 10 0	10 19 0	2	814 2 27	17 15 6	151 10 0	10 19 0
Totals	1	0 1 0	331 10 0	..	..	..	..	..	8	1,444 1 35	404 5 8	4,333 5 8	189 7 4	8	1,444 1 35	404 5 8	4,333 5 8	189 7 4
Cheviot Estate.																		
Lease in perpetuity	..	..	..	..	..	..	..	..	1	106 3 0	55 10 2	999 3 8	5 11 0	1	106 3 0	55 10 2	999 3 8	5 11 0
Grand totals	8	823 2 20	779 0 11	..	..	..	..	..	30	4,786 1 3	573 12 11	6,827 13 1	261 8 11	30	4,786 1 3	573 12 11	6,827 13 1	261 8 11

* Additional deposits made on account of lands returned in previous years.

Table 25.—RETURN SHOWING THE AREA OF BUSH FELLED ON LANDS SOLD OR LEASED BY THE CROWN FROM 1ST APRIL, 1895, TO 31ST MARCH, 1913.

District.	Felled during the Year on Lands taken up during the Year.	Felled during the Year on Lands taken up in Previous Years.	Total felled at 31st March, 1913.
	A. R. P.	A. R. P.	A. R. P.
Auckland	825 0 0	18,824 0 0	234,409 0 0
Hawke's Bay		9,087 0 0	183,915 0 0
Taranaki	350 0 0	11,720 0 0	85,345 0 0
Wellington	4,163 0 0	23,200 0 0	778,838 0 0
Nelson	800 0 0	11,000 0 0	93,585 0 0
Marlborough	..	2,937 0 0	107,024 0 0
Westland	300 0 0	2,000 0 0	77,513 0 0
Otago	..	285 0 0	24,875 0 0
Southland	105 0 0	1,000 0 0	17,544 0 0
Totals	6,543 0 0	80,053 0 0	1,603,048 0 0

Table 26.—STATEMENT OF THE NUMBER OF SELECTORS ON THE BOOKS OF THE LANDS AND SURVEY DEPARTMENT ON 31ST MARCH, 1913.

District.	Deferred Payment.		Perpetual Lease.		Occupation with Right of Purchase.		Lease in Perpetuity.				Renewable Lease.					Agricultural Lease.	Mining Districts Land Occupation Leases.		Village Settlement, Deferred Payment.	Village Settlement, Perpetual Lease.	Village Settlement, Occupation with Right of Purchase.	Village Settlement, Lease in Perpetuity.			Village Settlement, Renewable Lease.		
	Crown Lands.	Endowment Lands.	Crown Lands.	Endowment Lands.	Crown Lands.	Endowment Lands.	Crown Lands.	Cheviot Estate.	Land for Settlements.	Endowment Lands.	Crown Lands.	National-endowment Lands.	Land for Settlements.	Cheviot Estate.	Ordinary Endowment Lands.		Crown Lands.	Endowment Lands.				Crown Lands.	Land for Settlements.	Endowment Lands.	National-endowment Lands.	Land for Settlements.	Crown Lands.
Auckland ..	4	..	156	3	2,717	4	1,184	..	622	7	10	392	317	..	2	..	203	..	..	..	..	51	..	..	32	..	..
Hawke's Bay ..	..	..	5	5	341	..	204	..	426	18	6	51	211	..	..	..	..	..	..	..	7	78	16	..	7	2	..
Taranaki.. ..	..	..	8	..	478	..	466	..	37	..	28	42	26	..	..	..	..	..	..	..	5	10	..	..	..	..	..
Wellington ..	..	..	6	..	637	..	473	..	298	..	119	45	71	..	..	..	..	..	..	..	..	485	..	..	9	..	156
Nelson	5	..	5	..	222	..	474	..	13	14	..	374	22	..	28	..	35*	77	..	..	..	..	..	..	..	..	..
Marlborough ..	..	..	6	..	41	..	324	..	288	..	..	59	25	..	..	..	5	..	..	1	..	11	..	..	29	..	..
Westland ..	..	..	7	..	87	..	398	..	28	..	..	291	..	..	..	..	82	..	..	..	..	10	..	..	6	..	..
Canterbury ..	1	..	15	..	23	..	244	118	1,111	68	..	15	458	13	..	..	..	..	6	12	7	14	..	..	..	..	..
Otago	7	..	145	16	308	..	792	..	535	9	..	178	181	..	..	17	299	..	1	11	2	102	30	4	16	1	..
Southland ..	..	..	42	11	472	1	336	..	237	44	..	121	31	..	..	..	28	..	6†	61	2	248	..	..	32	..	..
Totals ..	17	..	395	35	5,326	5	4,895	118	3,595	160	163	1,568	1,342	13	30	17	652	77	7 6†	85	23	1,009	46	4	131	3	156

District.	Village-homestead Special Settlement.				Special-settlement Associations.		Improved-farm Special Settlements.			Small Grazing-runs.				Grazing-farms, Cheviot Estate.	Pastoral.‡					Miscellaneous.					Thermal Springs, Rotorua.	Educational Endowments (Education Reserves Acts).		Total.
							Crown Lands.																					
	Crown Lands.	Cheviot Estate.	National-endowment Lands.	Ordinary Endowment Lands.	Crown Lands.	Land for Settlements.	Complete.	Not registered.	National-endowment Lands.	Crown Lands.	Land for Settlements.	National-endowment Lands.	Ordinary Endowment Lands.		Crown Lands.	Cheviot Estate.	Land for Settlements.	National-endowment Lands.	Ordinary Endowment Lands.	Crown Lands.	Cheviot Estate.	Land for Settlements.	National-endowment Lands.	Ordinary Endowment Lands.		Primary Education.	Secondary Education.	
Auckland ..	25	..	..	..	67	..	70	51	..	5	5	15	2	..	216	..	..	47	8	323	..	40	6	1	331	498	139	7,553
Hawke's Bay ..	29	..	..	..	14	..	16	..	..	48	16	49	2	..	12	..	..	1	..	133	..	15	1	1	..	188	24	1,926
Taranaki.. ..	..	..	..	..	86	..	289	40	32‖	6	..	4	..	..	..	..	..	..	..	181	..	2	3	20	..	337	45	2,145
Wellington ..	164	..	12	..	448	..	190	76	..	79	7	9	5	..	4	..	..	18	..	423	..	13	6	14	..	504	12	4,283
Nelson	..	..	..	19	..	..	..	..	..	..	..	9	..	..	136	..	..	116	26	364	..	..	201	363	..	90	32	2,625
Marlborough ..	8	..	..	..	..	..	..	..	..	9	31	75	..	..	32	..	..	15	..	204	..	42	..	..	..	40	3	1,248
Westland ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	135	..	..	161	..	515	..	3	357	7	..	50	30	2,167
Canterbury ..	252	92	..	57	30	11	..	..	..	20	44	48	..	34	76	1	..	51	..	711	52	53	..	18	..	222	..	3,877
Otago	69	..	..	..	14	..	..	..	..	85	10	284	18	..	173	..	4	56	5	939	..	87	19	7	..	398	48	4,870
Southland ..	46	..	..	..	..	..	39	..	..	..	2	20	3	..	65	..	..	28	7	499	..	11	..	4	..	692	30	3,118
Totals ..	593	92	12	76	659	11	604	167	32	252	115	513	30	34	849	1	4	493	46	4,292	52	266	593	435	331	3,019	363	33,812

* Includes one national-endowment holding. † Lease-in-perpetuity freeholds (deferred payment). ‡ Includes pastoral licenses in mining districts under special regulations. ‖ Includes three not registered.

Table 27.—STATEMENT SHOWING THE TOTAL NUMBER OF SELECTORS, WITH AREA OF CROWN LAND SELECTED OR HELD, THE YEARLY RENT PAYABLE, AND RENT IN ARREAR ON THE 31ST MARCH, 1913.

Tenure.	Total Number of Selectors.	Total Area held.	Total Yearly Rental or Instalment payable.	Total Amount of such Rents or Payments in Arrear.
		A. R. P.	£ s. d.	£ s. d.
Ordinary Crown Lands—				
Deferred payment	17	2,555 1 3	29 9 10	..
Perpetual lease	395	66,139 0 26	2,182 8 6	38 11 0
Occupation with right of purchase	5,326	1,768,298 0 3	103,838 4 9	5,173 1 9
Lease in perpetuity	4,895	1,423,263 1 25	45,273 15 0	767 11 2
Renewable lease	163	26,716 2 13	2,521 12 8	151 16 8
Agricultural lease	17	550 1 0	23 7 9	..
Mining districts land occupation leases	651	23,749 0 33	1,245 0 2	72 8 11
Village settlements—				
Deferred payment	7	113 1 6	16 17 6	0 18 8
Perpetual lease	85	1,247 3 7	168 19 6	1 4 0
Occupation with right of purchase	23	15 0 7	11 3 6	0 12 6
Lease in perpetuity	1,009	21,589 2 22	4,487 0 8	68 8 10
Renewable lease	156	1,142 3 4	590 10 8	20 1 4
Lease in perpetuity freehold (deferred payment)	6	154 2 33	30 16 4	..
Village-homestead special settlements—				
Perpetual lease	249	4,170 0 39	549 18 10	22 6 8
Lease in perpetuity	344	9,071 2 30	1,029 15 4	35 17 3
Special-settlement associations—				
Perpetual lease	10	669 0 8	48 4 0	..
Lease in perpetuity	649	113,674 0 7	6,128 18 3	146 0 2
Improved-farm special settlements—				
Occupation with right of purchase	442	61,223 3 2	6,135 0 8	877 2 9
Lease in perpetuity	328	41,057 0 0	3,244 3 8	94 12 10
Renewable lease	1	255 0 0	26 0 8	..
Small grazing-runs	252	461,412 2 29	20,958 8 0	1,016 15 1
Pastoral runs	441	6,980,983 2 32	42,112 18 8	18 5 0
Pastoral licenses in mining districts under special regulations	408	96,592 2 17	2,164 17 4	288 18 10
Miscellaneous leases	4,292	668,995 1 19	19,301 17 6	1,121 17 2
Totals	20,166	11,773,640 1 5	262,119 9 9	9,916 10 7
Cheviot Estate—				
Lease in perpetuity	118	24,385 2 25	6,423 15 6	58 8 0
Renewable lease	13	644 3 36	496 1 4	..
Village-homestead special settlement	92	2,480 1 0	870 10 4	22 18 8
Grazing-farms	34	45,021 1 32	6,424 3 2	2,879 19 6
Pastoral runs	1	1,642 0 0	193 3 8	..
Miscellaneous	52	1,181 2 8	250 12 8	41 17 6
Totals	310	75,355 3 21	14,658 6 8	3,003 3 8
Land for Settlements—				
Lease in perpetuity	3,595	663,099 0 38	192,578 9 5	1,970 15 2
Renewable lease	1,342	484,773 3 10	108,032 0 1	2,774 4 9
Lease in perpetuity (village settlement)	46	438 1 28	342 7 8	4 7 9
Renewable lease (village settlement)	3	9 3 16	9 18 0	..
Special-settlement associations	11	2,114 1 9	162 7 8	..
Small grazing-runs	115	203,322 2 15	26,709 13 0	498 3 9
Pastoral runs	4	1,739 3 13	174 16 0	..
Miscellaneous	266	11,234 1 12	2,231 19 9	14 10 11
Totals	5,382	1,366,732 1 21	330,241 11 7	5,262 2 4
National-endowment Lands—				
Renewable lease—				
Ordinary	1,568	444,400 3 18	18,187 4 0	996 10 9
Village settlement	131	1,455 2 38	451 16 6	..
Village-homestead special settlement	12	125 2 21	15 13 1	..
Improved-farm special settlement	32	5,236 1 20	554 17 4	35 12 10
Mining districts land occupation leases	1	12 0 0	1 0 0	..
Small grazing-runs	513	1,715,472 3 10	32,372 3 7	878 14 4
Pastoral runs	199	3,823,649 2 37	34,384 2 3	97 5 0
Pastoral licenses in mining districts under special regulations	294	56,521 0 11	1,294 4 6	154 0 3
Miscellaneous leases	593	277,734 1 30	2,297 12 7	229 18 7
Totals	3,343	6,324,608 2 25	89,558 13 10	2,392 1 9
Thermal springs (Rotorua)	331	4,057 1 33	2,252 15 6	138 12 3
Grand totals	29,532	19,544,394 2 25	698,830 17 4	20,712 10 7
Education Reserves Acts—				
Primary-education endowments	3,019	733,712 2 10	63,642 11 11	1,367 2 5
Secondary-education endowments	363	38,640 2 33	8,389 11 2	93 10 10
Other endowment lands	898	403,310 2 14	15,428 5 0	4,589 7 2

Table 28.—SUMMARY OF ARREARS DUE TO THE CROWN ON 31ST MARCH, 1913.

Tenure.	Exclusive of Current Half-year's Rent.							Inclusive of Current Half-year's Rent.						
	Number of Selectors.	Area.			Amount in Arrear.			Number of Selectors.	Area.			Amount in Arrear.		
		A.	R.	P.	£	s.	d.		A.	R.	P.	£	s.	d.
Ordinary Crown Lands—														
Perpetual lease	8	1,154	2	6	38	11	0	29	3,297	0	2	97	19	5
Occupation with right of purchase	200	73,108	1	5	5,173	1	9	668	227,512	3	2	11,834	10	5
Lease in perpetuity	104	28,798	2	1	767	11	2	479	119,916	2	24	2,451	2	5
Renewable lease	7	3,971	2	7	151	16	8	28	5,549	2	13	342	6	1
Mining districts land occupation leases	25	1,153	2	8	72	8	11	106	4,709	1	9	216	6	1
Village settlements, deferred payment	1	5	0	0	0	18	8	2	9	2	10	2	8	11
Village settlements, perpetual lease	2	3	0	12	1	4	0	16	153	1	17	22	15	5
Village settlements, occupation with right of purchase	1	0	2	29	0	12	6	6	2	3	27	2	7	6
Village settlements, lease in perpetuity	23	630	0	3	68	8	10	100	1,983	2	14	268	8	0
Village settlements, renewable lease	9	45	0	12	20	1	4	15	97	3	20	54	15	9
Village-homestead special settlements	24	472	1	20	58	3	11	73	1,700	3	9	160	10	3
Special-settlement associations	19	3,672	0	3	146	0	2	52	9,361	2	14	370	13	10
Improved farms	68	10,050	0	31	971	15	7	162	24,103	0	20	2,386	16	10
Small grazing-runs	13	20,789	0	31	1,016	15	1	64	95,828	1	14	3,820	2	11
Pastoral runs	5	27,060	0	0	18	5	0	50	634,716	0	13	1,549	11	6
Pastoral licenses in mining districts under special regulations	58	18,460	2	28	288	18	10	135	42,797	0	11	768	15	10
Miscellaneous (not otherwise specified)	211	49,442	1	10	1,121	17	2	673	167,414	3	0	3,757	7	0
Totals	778	238,817	0	36	9,916	10	7	2,658	1,339,154	1	19	28,106	18	2
Cheviot Estate—														
Lease in perpetuity	1	292	0	0	58	8	0	1	292	0	0	87	12	0
Renewable lease	..	..			..			2	71	0	7	29	10	8
Village-homestead special settlement	6	50	0	0	22	18	8	6	50	0	0	37	18	8
Grazing-farms	23	33,842	2	0	2,879	19	6	32	92,779	1	14	5,964	3	10
Miscellaneous	5	171	1	36	41	17	6	16	367	2	36	126	10	1
Totals	35	34,355	3	36	3,003	3	8	57	93,560	0	17	6,245	15	3
Land for Settlements—														
Lease in perpetuity	92	14,387	0	8	1,970	15	2	290	41,062	1	3	6,853	6	11
Renewable lease	59	19,921	2	34	2,774	4	9	164	42,441	1	23	7,224	5	3
Village lease in perpetuity	2	8	1	32	4	7	9	4	9	0	38	7	2	8
Small grazing-runs	5	6,653	0	35	498	3	9	16	28,988	0	38	1,925	1	1
Miscellaneous	6	52	2	0	14	10	11	27	933	2	7	94	16	5
Totals	164	41,022	3	29	5,262	2	4	501	113,434	2	29	16,104	12	4
National-endowment Lands—														
Renewable lease, ordinary	66	19,556	3	17	996	10	9	198	56,377	1	15	2,289	15	0
Renewable lease, village settlements	..	..			..			9	146	0	0	16	0	0
Renewable lease, improved-farm special settlement	3	516	0	0	35	12	10	9	1,533	1	36	113	16	1
Small grazing-runs	24	77,802	1	20	878	14	4	215	741,410	3	11	7,738	13	3
Pastoral runs	4	52,516	0	0	97	5	0	25	303,812	2	0	1,079	7	3
Pastoral licenses in mining districts under special regulations	27	10,878	3	1	154	0	3	88	21,474	1	15	422	13	5
Miscellaneous	39	10,698	0	2	229	18	7	121	52,640	2	1	460	15	2
Totals	163	171,968	0	0	2,392	1	9	665	1,177,394	3	38	12,121	0	2
Thermal springs, Rotorua	25	59	1	17	138	12	3	76	1,325	1	23	390	8	3
Grand totals	1,165	486,223	1	38	20,712	10	7	3,957	2,724,869	2	6	62,968	14	2
Primary-education endowments	128	18,060	2	0	1,367	2	5	536	119,445	1	4	8,554	8	8
Secondary-education endowments	23	1,031	2	29	93	10	10	80	8,797	3	3	604	19	5

Table 29.—ENDOWMENTS: RETURN OF REVENUE RECEIVED DURING THE YEAR ENDED 31ST MARCH, 1913.

Tenure.	Revenue received.			Tenure.	Revenue received.		
	£	s.	d.		£	s.	d.
Educational Endowments (administered under the Education Reserves Acts)—				Village-homestead special settlement	271	5	2
Primary education	63,023	18	9	Village lease in perpetuity	15	17	6
Secondary education	8,374	4	6	Small grazing-runs	1,845	5	5
				Pastoral runs	5,432	9	10
Total	£71,398	3	3	Pastoral licenses in mining districts under special regulations	49	6	3
Other Endowment Lands—				Coal and mineral leases and royalties	18,199	11	3
Cash lands	7	0	0	Timber licenses and royalties	482	15	0
Deferred payments	8	3	8	Miscellaneous leases	188	13	3
Perpetual lease and small areas	325	8	9	Rent of reserves	2,094	0	10
Occupation with right of purchase	46	5	1				
Lease in perpetuity	2,130	4	7	Total	£31,198	9	0
Renewable lease	18	14	0				
Mining districts land occupation leases	83	8	5	Grand total	£102,596	12	3

NOTE.—Revenue from national-endowment lands is not included in this table.

Table 30.—ENDOWMENT LANDS (OTHER THAN NATIONAL ENDOWMENT) TAKEN UP DURING THE YEAR ENDED 31ST MARCH, 1913.

District.	Nature of Endowments.	Cash Lands.			Renewable Lease.			Mining Districts Land Occupation Leases.		
		No. of Purchasers.	Area.	Amount realized.	Number.	Area.	Annual Instalments.	Number.	Area.	Annual Rental.
	Educational Endowments (Education Reserves Acts)—		A. R. P.	£ s. d.		A. R. P.	£ s. d.		A. R. P.	£ s. d.
Hawke's Bay	Primary	..	..	..	2	1 0 37	16 0 0	..	..	..
Taranaki	〃	2	2 3 18	52 2 0	5	1 3 9	24 0 0	..	..	..
〃	Secondary	..	..	..	2	0 2 30	12 0 0	..	..	..
Southland..	Primary	4	12 3 11	478 17 6	..	..	..	..	..	..
Totals	..	6	15 2 29	530 19 6	9	3 2 36	52 0 0	..	..	..
	Other Endowment Lands—									
Nelson	Westport Harbour Board ..	..	..	..	1	12 2 20	1 19 0	1	38 1 0	1 18 4
Totals	..	..	..	..	1	12 2 20	1 19 0	1	38 1 0	1 18 4
Grand totals ..	..	6	15 2 29	530 19 6	10	16 1 16	53 19 0	1	38 1 0	1 18 4

District.	Nature of Endowments.	Pastoral Runs.			Pastoral Runs in Mining Districts under Special Regulations.			Miscellaneous Leases.		
		Number.	Area.	Annual Rental.	Number.	Area.	Annual Rental.	Number.	Area.	Annual Rental.
	Educational Endowments (Education Reserves Acts)—		A. R. P.	£ s. d.		A. R. P.	£ s. d.		A. R. P.	£ s. d
Auckland	Primary	..	..	..	..	..	..	33	685 0 28	111 19 0
〃	Secondary	..	..	..	..	..	..	35	38 3 38	377 12 6
Taranaki	Primary	..	..	..	..	..	..	1	1 0 0	18 4 0
Nelson	〃	..	..	..	..	..	..	4	773 0 34	18 10 0
Marlborough	〃	..	..	..	..	..	..	5	409 0 0	40 12 0
Westland	〃	..	..	..	..	..	..	4	362 0 0	6 0 0
〃	Secondary	..	..	..	..	..	..	2	8 0 11	2 0 0
Otago	Primary	..	..	..	..	..	..	13	648 3 21	97 16 8
Southland	〃	..	..	..	..	..	..	26	3,762 3 8	602 17 6
〃	Secondary	..	..	..	..	..	..	4	138 0 36	73 16 0
Totals	..	..	..	..	..	..	..	127	6,827 1 16	1,349 7 8
	Other Endowment Lands—									
Auckland	Museum	..	..	..	3	1,190 0 0	27 0 0	..	..	..
Nelson	Westport Harbour Board ..	..	..	..	5	1,155 1 24	21 12 4	5	16 0 6	7 15 0
Westland	Grey Harbour Board ..	..	..	..	..	..	..	2	3,463 1 32	27 4 6
〃	University	..	..	..	..	..	..	1	5 0 0	3 0 0
Otago	〃	..	..	..	..	..	..	2	54 0 0	2 10 0
Southland	Bluff Harbour Board ..	1	3,468 0 0	126 0 0	..	..	..	..	..	..
Totals	..	1	3,468 0 0	126 0 0	8	2,345 1 24	48 12 4	10	3,538 1 38	40 9 6
Grand totals ..	..	1	3,468 0 0	126 0 0	8	2,345 1 24	48 12 4	137	10,365 3 14	1,389 17 2

Table 31.—Return of Education Endowments dealt with under the Education Reserves Acts to 31st March, 1913.

Land District.	Total Area set apart.	Area opened for Selection during the Year.	Taken up during the Year.			Expiries during the Year.			Renewal of Leases during the Year.		
			Number of Selectors.	Area.	Annual Rental.	Number.	Area.	Annual Rental.	Number.	Area.	Annual Rental.
Primary Education.											
	A. R. P.	A. R. P.		A. R. P.	£ s. d.		A. R. P.	£ s. d.		A. R. P.	£ s. d.
Auckland	116,020 0 4	2,696 0 4	33	685 0 28	111 19 0	8	514 2 0	22 9 10	8	526 0 0	45 19 10
Hawke's Bay	70,422 1 4	1 2 37	2	1 0 37	16 0 0	..	..	..	..	..	..
Taranaki	51,126 0 15	3 3 11	6	2 3 9	42 4 0	..	..	..	..	..	..
Wellington	93,955 2 37	..	..	..	..	16	154 1 21	82 10 6	13	150 2 29	155 13 2
Nelson	9,291 0 23	773 3 21	4	773 0 34	18 10 0	..	..	..	5	0 3 4	10 16 0
Marlborough	1,148 2 29	55 0 0	5	409 0 0	40 12 0	6	115 2 5	64 5 0	3	114 0 10	65 5 0
Westland	14,613 0 37	..	4	362 0 0	6 0 0	..	..	..	..	..	..
Canterbury	70,160 1 21	..	..	..	..	4	908 0 0	321 3 10	4	908 0 0	482 5 2
Otago	44,298 2 33	648 3 21	13	648 3 21	97 16 8	22	1,650 3 20	109 17 0	22	1,615 0 2	210 4 0
Southland	332,299 1 20	3,540 0 0	26	3,762 3 8	602 17 6	47	6,000 1 11	504 10 4	24	4,871 1 25	679 1 10
Totals	803,335 2 23	7,719 1 14	93	6,645 0 17	935 19 2	103	9,343 2 17	1,104 16 6	79	8,185 3 30	1,649 5 0
Secondary Education.											
Auckland	10,333 1 4	112 3 35	35	38 3 38	377 12 6	1	98 0 0	5 14 8	1	102 0 0	12 8 2
Hawke's Bay	7,484 1 2	..	..	..	..	..	..	..	..	..	..
Taranaki	2,353 2 10	0 2 30	2	0 2 30	12 0 0	..	..	..	..	..	..
Wellington	12,177 3 27	..	..	..	..	..	..	..	..	..	..
Nelson	802 1 21	0 2 7	..	..	..	..	..	..	..	..	..
Marlborough	284 1 19	..	..	..	..	1	93 1 24	21 0 0	1	93 1 24	70 0 0
Westland	4,448 0 21	0 0 36	2	8 0 11	2 0 0	..	..	..	..	..	..
Canterbury	1,024 0 0	..	..	..	..	..	..	..	..	..	..
Otago	2,101 3 5	..	..	..	..	2	129 3 1	57 10 6	2	129 3 1	83 0 6
Southland	605 0 0	138 0 0	4	138 0 36	73 16 0	4	166 0 32	27 17 4	1	25 3 38	9 7 6
Totals	41,614 2 29	252 1 28	43	185 3 35	465 8 6	8	487 1 17	112 2 6	5	351 0 23	174 16 2
Grand totals	844,950 1 12	7,971 3 2	136	6,831 0 12	1,401 7 8	111	9,830 3 34	1,216 19 0	84	8,537 0 13	1,824 1 2

Table 31.—Return of Education Endowments dealt with under the Education Reserves Acts to 31st March, 1913—*continued.*

Land District.	Forfeitures during the Year.			Surrenders during the Year.			Net Area held on 31st March, 1913.			Gross Amount received during the Year.	Selectors in Arrear on 31st March, 1913.		
	Number.	Area.	Annual Rental.	Number.	Area.	Annual Rental.	Number of Selectors.	Area.	Annual Rental.		Number.	Area.	Amount.
Primary Education.													
		A. R. P.	£ s. d.		A. R. P.	£ s. d.		A. R. P.	£ s. d.	£ s. d.		A. R. P.	£ s. d.
Auckland	5	546 0 35	23 7 6	..	..	..	498	67,309 3 5	3,568 5 1	3,611 16 2	37	1,870 3 0	305 5 8
Hawke's Bay	2	1 2 12	3 5 0	..	..	..	188	70,306 1 2	7,104 19 1	6,797 3 7	16	3,100 3 29	117 0 3
Taranaki	1	1 0 0	6 4 0	..	..	..	337	48,070 3 15	5,244 13 0	5,604 4 1	22	3,494 0 36	127 8 6
Wellington	..	..	..	2	593 2 32	26 4 2	504	92,629 0 3	8,985 0 7	9,134 5 4	22	2,223 0 7	224 2 4
Nelson	..	..	..	1	0 0 8	0 10 6	90	5,632 0 4	407 0 6	404 0 1	11	342 2 30	146 2 0
Marlborough	1	0 1 35	7 10 0	..	..	..	40	1,127 2 21	439 14 6	440 2 10	2	70 1 0	4 13 0
Westland	..	..	..	..	..	..	50	13,647 2 36	272 10 11	205 11 9	2	5,005 0 0	80 16 8
Canterbury	..	..	..	..	..	..	222	70,160 1 21	20,812 8 10	19,343 3 6	6	868 2 15	281 16 7
Otago	5	44 0 0	10 13 6	2	15 1 0	1 7 6	398	44,056 3 6	3,439 4 11	3,300 18 9	5	283 3 6	46 5 1
Southland	4	7 3 8	9 8 6	..	..	..	692	320,772 0 17	13,368 14 6	14,182 12 8	5	801 0 37	33 12 4
Totals	18	601 0 10	60 8 6	5	609 0 0	28 2 2	3,919	733,712 2 10	63,642 11 11	63,023 18 9	128	18,060 2 0	1,367 2 5
Secondary Education.													
Auckland	1	1 0 8	2 0 0	..	..	..	139	8,540 1 9	1,220 15 4	1,138 16 11	13	857 2 14	35 19 4
Hawke's Bay	..	..	..	..	..	..	24	7,482 3 0	1,888 10 11	1,781 16 1	1	0 0 32	0 5 0
Taranaki	..	..	..	..	..	..	45	2,317 1 10	952 6 2	824 16 7	5	137 1 11	49 5 6
Wellington	..	..	..	..	..	..	12	12,177 3 27	2,693 8 8	3,083 16 1	..	..	..
Nelson	..	..	..	..	..	..	32	757 2 30	129 2 0	131 2 11	3	1 2 12	4 1 0
Marlborough	..	..	..	..	..	..	3	255 1 22	85 10 0	74 8 6	..	..	..
Westland	..	..	..	..	..	..	30	3,385 1 29	159 0 0	133 9 2	1	35 0 0	4 0 0
Canterbury	..	..	..	..	..	..	..	*1,024 0 0	270 0 0	135 0 0	..	..	..
Otago	..	..	..	..	..	..	48	2,101 3 5	682 17 1	791 14 4	..	..	..
Southland	..	..	..	..	..	..	30	598 0 21	308 1 0	279 3 11	..	..	..
Totals	1	1 0 8	2 0 0	..	..	..	363	38,640 2 33	8,389 11 2	8,374 4 6	23	1,031 2 29	93 10 10
Grand totals ..	19	602 0 18	62 8 6	5	609 0 0	28 2 2	3,382	772,353 1 3	72,032 3 1	71,398 3 3	151	19,092 0 29	1,460 13 3

* Leased in conjunction with a primary-education reserve.

Table 32.—RETURN SHOWING POSITION AND TRANSACTIONS IN IMPROVED-FARM SETTLEMENTS FROM THEIR COMMENCEMENT TO 31ST MARCH, 1913.

District.	Area proclaimed.	Total Number of Sections in each Settlement.	Number of Settlers remaining in Occupation on 31st March, 1913.	Number of Persons resident.	Area occupied.	Total Area made Freehold.			Area felled.	Area grassed.
						Number.	Area.	Total Amount received.		
	Acres.				A. R. P.		A. R. P.	£ s. d.	Acres.	Acres.
Auckland	24,423	193	121	487	16,519 2 36	6	488 1 10	601 15 8	835*	7,159
Hawke's Bay	2,025	17	16	42	1,825 1 20	1	86 0 0	272 17 3	1,817	1,817
Taranaki	62,062	472	361	†	50,983 3 13	2	19 3 18	135 7 4	†	†
Wellington	44,694	360	266	1,360	34,330 0 20	79	6,955 3 25	9,287 5 6	†	†
Southland	4,862	57	39	135	4,113 0 13	6	619 1 3	934 3 11	3,217	2,998
Totals	138,066	1,099	803	..	107,772 0 22	94	8,169 1 16	11,231 9 8	..	..

District.	Amount paid to Selectors for Improvements.					Rent and Interest paid by Selectors.		Value of Improvements now on the Land, including those paid for by Government.
	Past Transactions.		During Year.		Total Payments.	During the Year ended 31st March, 1913.	From Commencement of System.	
	For Houses.	For Bushfelling and other Works.	For Houses.	For Bushfelling and other Works.				
	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
Auckland	3,542 13 7	12,130 18 10	216 6 9	2,494 10 6	18,384 9 8	1,234 16 2	6,202 0 6	38,760 5 0
Hawke's Bay	159 14 4	1,860 9 5	..	..	2,020 3 9	232 4 7	3,881 18 10	9,837 17 9
Taranaki	6,136 0 0	32,676 11 2	1,164 17 0	3,741 11 1	43,718 19 3	3,977 0 6	22,966 16 6	†
Wellington	4,587 0 0	20,680 12 11	1,009 10 0	2,077 16 11	28,354 19 10	2,219 1 1	30,494 11 9	†
Southland	902 1 0	11,155 14 2	..	..	12,057 15 2	270 3 9	3,471 12 7	10,890 8 0
Totals	15,327 8 11	78,504 6 6	2,390 13 9	8,313 18 6	104,536 7 8	7,933 6 1	67,017 0 2	..

* Area felled during year. † Figures not supplied.

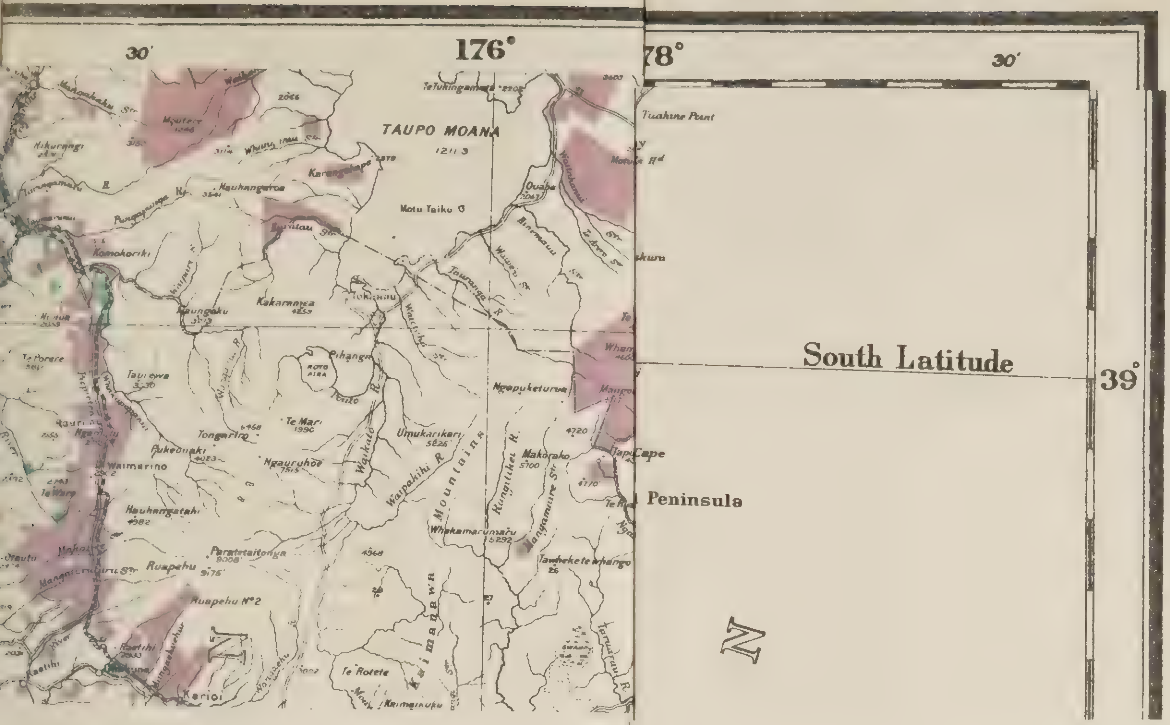
Table 33.—RETURN OF LANDS DISPOSED OF UNDER THE LAND FOR SETTLEMENTS ACTS TO THE 31ST MARCH, 1913.

Land District.	Area acquired, including Ascertained Surplus or Deficiency.	Area occupied by Roads and Reserves unlet.	Area of Land unlet, including Land forfeited, surrendered, or resumed and not relet, and also Land not yet offered for Selection.	Total Area sold for Cash.	New Selections and Additions to Holdings during the Year. Number of Selectors.	New Selections and Additions to Holdings during the Year. Area.	New Selections and Additions to Holdings during the Year. Annual Rent payable.	Total Lands leased at Date. Number of Selectors.	Total Lands leased at Date. Area.	Total Lands leased at Date. Annual Rent payable.
	A. R. P.	A. R. P.	A. R. P.	A. R. P.		A. R. P.	£ s. d.		A. R. P.	£ s. d.
Auckland	276,323 3 26	7,329 1 13	70,279 3 32	101 3 38	46	6,873 0 21	416 15 6	984	198,612 2 23	22,957 5 3
Hawke's Bay	219,987 2 21	2,018 0 16	4,042 2 33	32 2 18	40	23,320 2 6	6,775 19 0	686	213,894 0 34	70,367 9 10
Taranaki	4,577 3 17	50 3 11	24 2 10	..	10	42 3 12	96 15 0	65	4,502 1 36	3,738 4 2
Wellington	60,514 2 24	853 0 8	4,949 2 36	12 0 19	9[*]	34 2 19	50 5 6	386[†]	54,699 3 1	19,326 4 2
Nelson	23,937 1 24	325 1 15	872 0 0	2 0 0	1	769 0 0	36 18 10	35	22,738 0 9	2,072 7 10
Marlborough	116,364 2 21	2,380 0 23	700 1 21	12 1 35	16	3,183 1 32	70 14 0	386	113,084 0 22	20,143 0 3
Westland	5,124 3 26	102 0 11	..	..	..	..	..	31	5,022 3 15	540 10 10
Canterbury	488,456 0 26	3,164 3 12	3,411 3 15	77 1 4	171	95,459 2 27	23,084 13 4	1,677	481,802 0 35	123,154 18 5
Otago	218,444 3 31	2,636 0 20	1,144 1 26	233 0 7	29	3,648 2 26	2,713 0 0	848	214,431 1 21	55,164 8 10
Southland	60,468 3 13	850 1 39	1,860 0 35	27 1 34	12	2,068 3 36	700 4 6	281	57,730 2 25	12,425 12 0
Totals	1,474,200 3 32	19,710 1 8	87,285 3 8	498 3 35	334[*]	135,400 3 19	33,945 5 8	5,379[†]	1,366,518 1 21	329,890 1 7

Land District.	Yearly Value of Unlet Land at 31st March, 1913.	Occupied Land. Number of Houses on Holdings.	Occupied Land. Number of Souls resident on Holdings.	Occupied Land. Value of Improvements.	Amount advanced to Selectors for Buildings, &c. During Previous Years.	Amount advanced to Selectors for Buildings, &c. During Year.	Amount advanced to Selectors for Buildings, &c. Total.	Arrears on 31st March, 1913. Number.	Arrears on 31st March, 1913. Area.	Arrears on 31st March, 1913. Rent in Arrear.	Rent and other Payments received during the Year.	Total Receipts from Inception to 31st March, 1913.
	£ s. d.			£ s. d.	£ s. d.	£ s. d.	£ s. d.		A. R. P.	£ s. d.	£ s. d.	£ s. d.
Auckland	2,744 8 6	854	3,478	378,296 1 3	2,208 15 0	..	2,208 15 0	36	10,030 1 33	949 0 2	24,558 1 10	205,833 19 6
Hawke's Bay	936 14 10	589	2,646	475,020 4 5	..	..	..	12	1,993 0 33	255 11 11	63,559 8 0	529,182 13 4
Taranaki	60 6 0	53	243	16,713 17 6	337 10 0	..	337 10 0	4	349 2 14	107 13 5	3,742 7 2	33,647 3 5
Wellington	1,611 13 3	380	1,614	200,139 0 0	2,510 0 0	..	2,510 0 0	16	616 3 19	339 10 6	19,520 4 4	181,233 7 1
Nelson	38 10 10	31	129	21,051 4 0	..	..	..	13	11,329 0 0	840 9 3	1,741 17 5	8,988 17 9
Marlborough	132 13 6	252	1,130	202,478 13 10	..	..	..	12	6,575 1 21	544 4 7	18,714 11 3	205,112 2 1
Westland	..	22	107	16,547 0 0	..	..	..	..	..	..	491 7 6	6,750 9 4
Canterbury	2,447 11 0	1,301	5,522	647,677 2 6	2,785 10 0	..	2,785 10 0	54	4,621 0 3	1,727 3 11	110,399 18 10	931,921 3 1
Otago	971 19 9	635	2,429	311,000 8 9	..	..	..	9	1,823 0 22	180 13 3	51,242 2 4	464,417 5 1
Southland	656 1 6	247	1,130	102,442 12 0	..	..	..	8	3,684 1 4	317 15 4	11,576 19 2	112,517 14 0
Totals	9,599 19 2	4,364	18,428	2,371,366 4 3	7,841 15 0	..	7,841 15 0	164	41,022 3 29	5,262 2 4	305,546 17 10	2,679,604 14 8
Miscellaneous receipts on lands not yet opened for selection ..											367 4 9	5,663 19 6
Payments of capital value under section 191 of the Land Act, 1908 ..											331 10 0	4,333 5 8
											306,245 12 7	2,689,601 19 10

[*] Excludes two miscellaneous licenses of lands in Hall-Jones Settlement, area 71 acres, annual rental £251 10s.

Excludes three miscellaneous licenses of lands in Hall-Jones and Waddington Settlements, area 214 acres, annual rental £351 10s.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Tauranga R.
Karangahape
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Hauhungatahi
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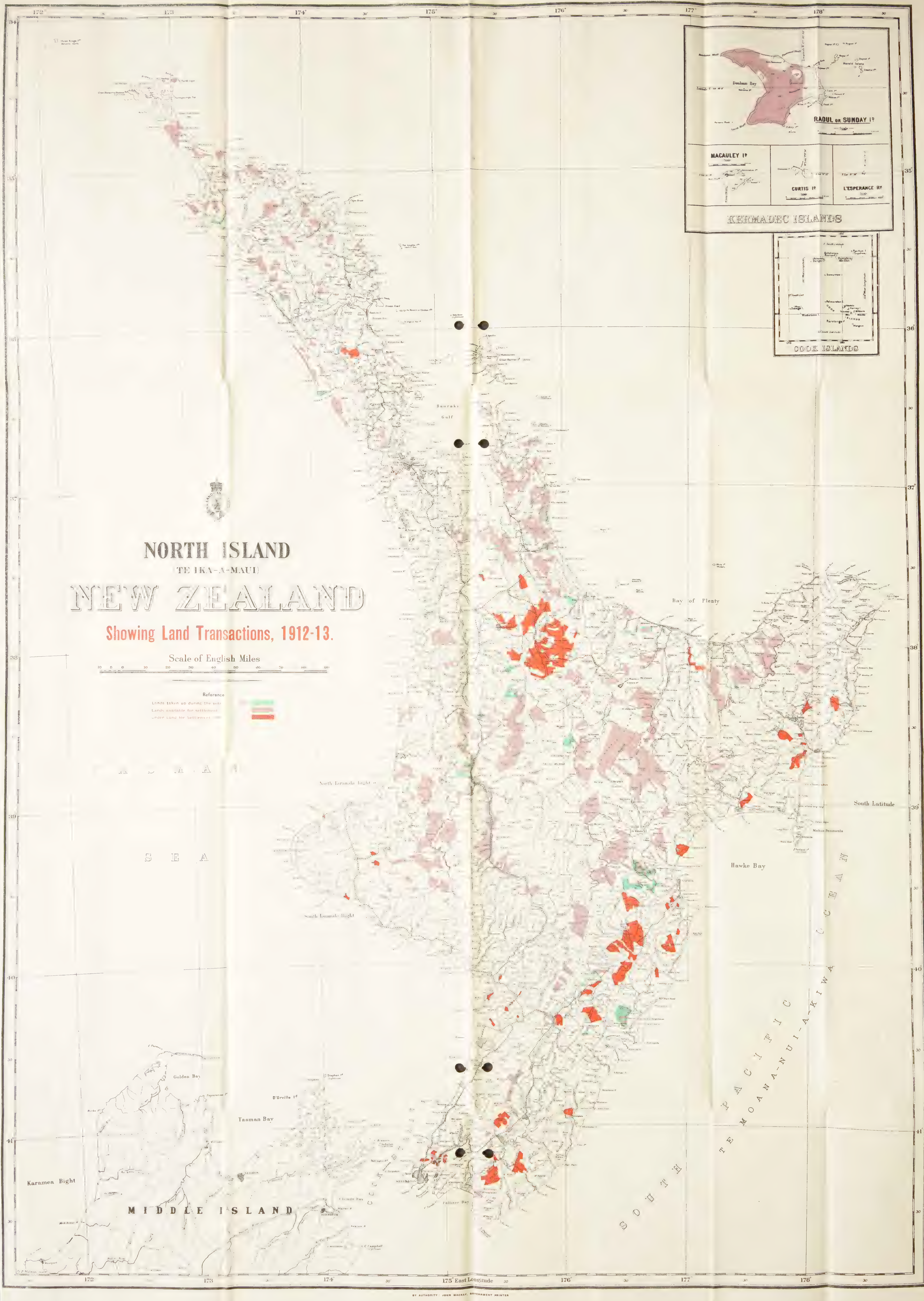

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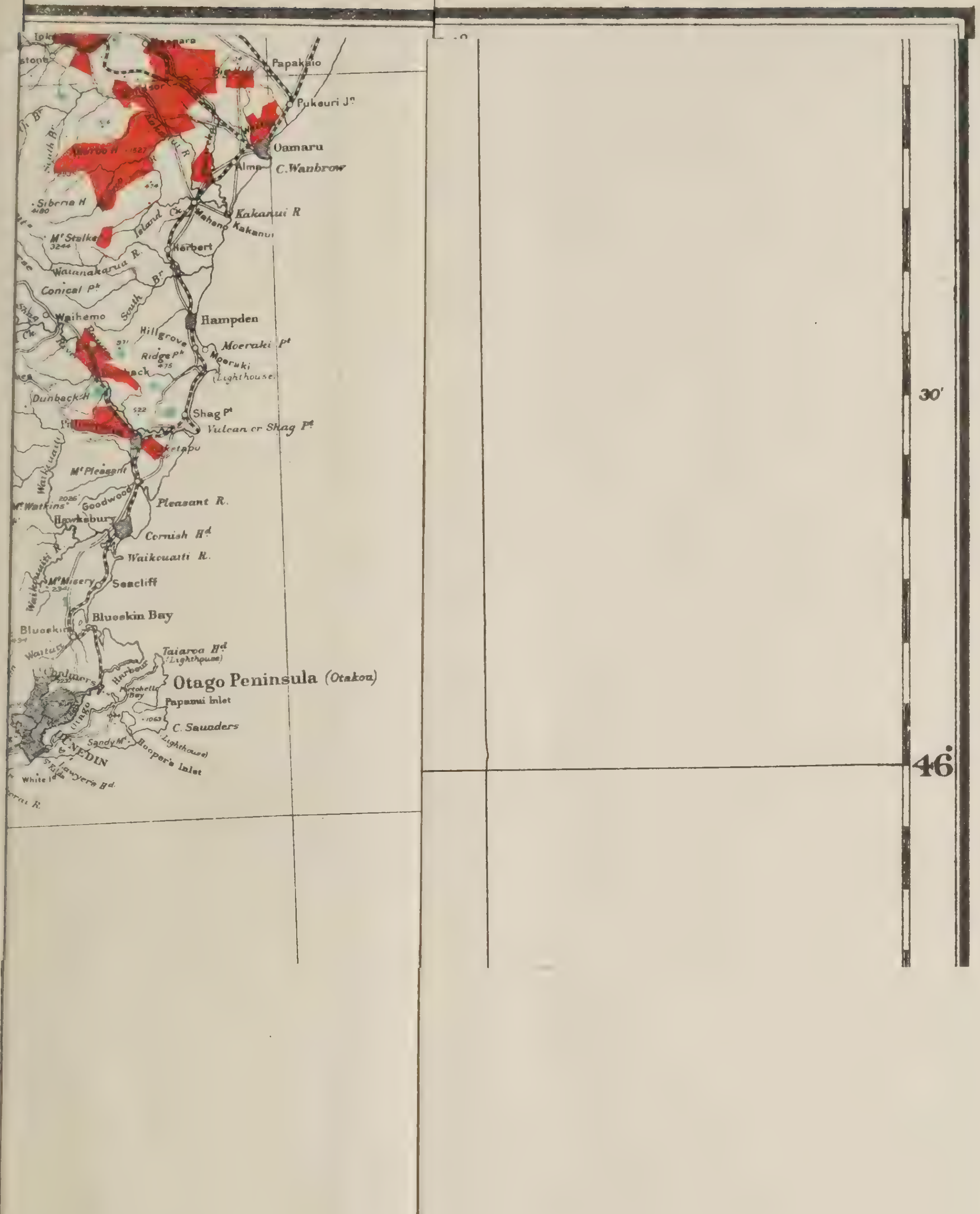
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Maheno
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Island Ck
Herbert
Waianakarua R.
Conical Pk
South Br
Waihemo
Hampden
Hillgrove
971
Ridge Pk
475
Moeraki Pt
Moeraki
(Lighthouse)
Dunback H
522
Shag Pt
Vulcan or Shag Pt
Mt Pleasant
2026
Mt Watkins
Goodwood
Pleasant R.
Hawksbury
Cornish Hd
Waikouaiti R.
Mt Misery
2341
Seacliff
Blueskin Bay
Blueskin
Waitati
Taiaroa Hd
(Lighthouse)
Otago Peninsula (Otakou)
Chalmers
Harbour
Portobello Bay
Papanui Inlet
Otago
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C. Saunders
(Lighthouse)
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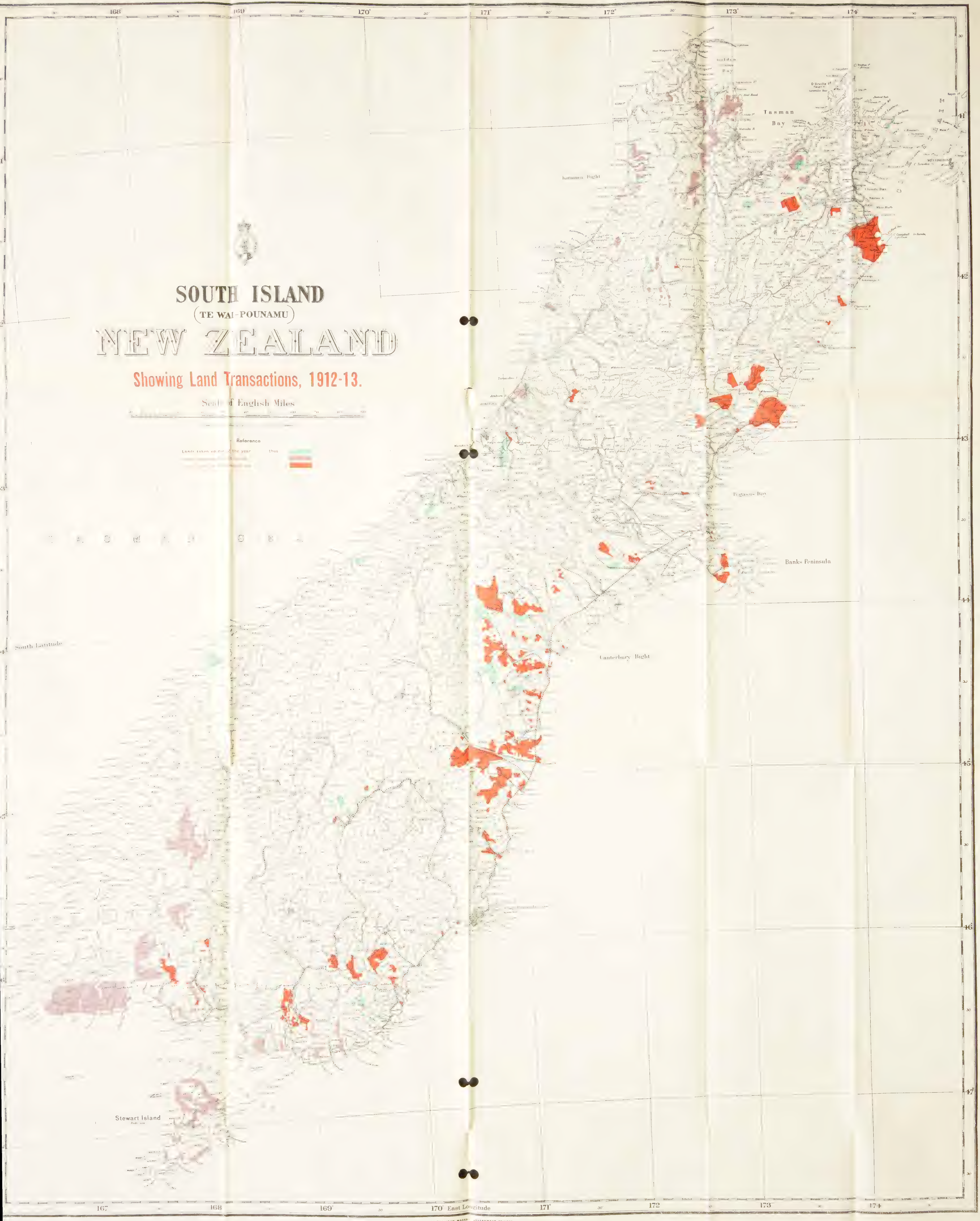

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NEW ZEALAND.

DEPARTMENT OF LANDS AND SURVEY.

REPORT

ON THE

SURVEY OPERATIONS

FOR THE

YEAR 1912-13.

BY

JAMES MACKENZIE,
SURVEYOR-GENERAL.

WELLINGTON.
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DEPARTMENT OF LANDS AND SURVEY:

SURVEYS

(ANNUAL REPORT ON).

Presented to both Houses of the General Assembly by Command of His Excellency.

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The SURVEYOR-GENERAL to the Hon. the MINISTER OF LANDS.

SIR,— Department of Lands and Survey, Wellington, 14th July, 1913.

I have the honour to submit herewith the annual report on the survey operations of the Department for the twelve months ended the 31st March, 1913.

I have, &c.,
JAMES MACKENZIE,
Surveyor-General.

The Hon. W. F. Massey, Minister of Lands.

REPORT.

The work for the past year has been, I am pleased to testify, a very favourable one indeed, and, taken as a whole, the area surveyed shows an excess over that of the previous year. Both the field and office staffs have worked in such a manner as to reflect great credit on themselves and to be productive of results which are extremely gratifying. Especially so is this the case when we consider the many disabilities at times under which some of their duties have to be carried out.

The number of surveyors employed were sixty-three staff, twelve temporary, and seventy-three contract, while apart from these there were, as usual, a number of cadets and surveyors' unlicensed assistants, all of whom were in full work during the year.

The total cost of the surveyors and their parties amounted to £113,661 6s., which is £24,131 in excess of that of the previous year. This is easily accounted for, in the first place, by the greater output consequent on the employment of additional surveyors, along with the difficulty in obtaining suitable hands for field parties, to meet the still great demand for settlement lands. There is also the coping with special and urgent survey work brought about by the acquisition of land under the Land for Settlements Act, which has to be attended to with special promptness so as to prevent loss of interest to the State. It must also be borne in mind that as settlement advances at its present rate the surveyors are driven back into more difficult country. This necessitates greater expense and brings about hardships that have to be endured and overcome—in fact, every year makes the life of the field surveyor on this account harder. This in many cases is intensified in the rough bush districts, where wet conditions so frequently prevail. Taking these facts into consideration, I think a perusal of the report will suffice to show that the staff has given a good account of itself for the season that has closed.

The following table gives a summary of the principal work completed during the year:—

TABLE A.

Class of Work.	Area.	Cost per Acre.	Total Cost.		
	Acres.		£	s.	d.
Triangulation, by staff surveyors	155,858	1.43d.	927	4	5
Topographical, by staff surveyors	50,657	2·13d.	450	0	2
Rural, by staff surveyors	337,521	2·00s.	33,600	14	6
Rural, by licensed surveyors	64,095	2·27s.	7,304	3	0
Rural, by licensed surveyors (costs not available) ..	8,299	..	..		
Village and suburban, by staff surveyors	2,647	6·57s.	869	11	3
Village and suburban, by licensed surveyors ..	31	14·60s.	22	16	3
Town, by staff surveyors	294 (in 527 sections)	34·60s. per section	911	7	10
Town, by licensed surveyors	37 (in 112 sections)	24·21s. per section	135	12	0
Native Land Court, by staff surveyors	44,600	23·90d.	4,442	9	10
Native Land Court, by licensed surveyors	608,090	*16·70d.	42,336	8	1
Native Land Court, by licensed surveyors (costs not available)	927	..	..		
Maori Land Board, by staff surveyors	15,792	22·86d.	1,504	1	3
Maori Land Board, by licensed surveyors	1,934	30·77d.	247	19	10
Gold-mining, by staff surveyors	206	4·04s.	41	13	6
Gold-mining, by licensed surveyors (costs not available)	1,706	..	..		
Roads and railways, by staff surveyors	†221·84 miles	£24·29 per mile	5,387	16	9
Roads, by licensed surveyors	1·50 ,,	£16·25 per mile	24	7	6
Roads, by licensed surveyors (costs not available) ..	7·00 ,,	..	..		

* The cost per acre is necessarily a low one when compared with the staff surveyors' work. This is due to subdivisional surveys of many blocks, where a large proportion of the outside boundaries of earlier surveys have been adopted without resurvey.

† Includes 18 miles of railway.

Taking these prices in the aggregate, the cost is much the same as in previous years. In most of the classes (except rural, where the price of 1·82s. per acre last year reaches 2s. per acre this year) the cost per acre is rather lower than previously, and the rate per acre by staff surveyors compares favourably with that of contract surveyors. Accurate deductions, however, cannot always be reached with safety by a mere comparison of prices such as these. Often our most energetic surveyors at the end of a year of toil are so hampered with circumstances and conditions quite beyond their control that they find the cost of their work in the end comes out at a higher rate than other surveyors who have been fortunate in being on a block where the "going" was very much easier. With the exception, however, of a few individual cases which I have noted as being higher than usual, I am satisfied that the State has received good value for the work done by its surveyors.

TRIANGULATION.

With the exception of the new secondary triangulation hereafter referred to, the work under this heading has been chiefly the extension of our triangulation to check settlement surveys in progress during the year.

The work on the new secondary triangulation has been pushed on actively, and many observations have been made by Mr. H. E. Girdlestone so as to allow a connection to be made between the Wairarapa and Okaiawa bases. A good many stations have still to be observed, however. A preliminary calculation by least squares has been made, and a provisional close of 2·723 links obtained in an approximate distance of 154 miles. This will probably be much improved when some eight of the triangles are reobserved. The area on hand between the bases is between two and three million acres.

Full particulars are given in the appendix of the provisional results of the calculation of the triangulation, and an example of the actual method of calculation adopted is given in detail.

Observations both for azimuth and latitude are now required at a number of points, so distributed as to eliminate as much as possible the errors due to the deflection of the plumb-line.

Mr. John Langmuir, Inspector of Surveys, has continued his work on the new base-line measurements during the year in his usual able, methodical, and scientific manner. The last base selected is situated on the Kaingaroa Plains. In regard to the accuracy of our base-line measurements I may say that, although the final results have not been worked out yet, as far as they are completed, however, I feel sure that the New Zealand work will stand comparison with that carried out in any part of the world. From particulars in Appendix III it will be seen that the probable errors vary from about 1 in 3,000,000 to 1 in 5,000,000, but this does not include final comparison with the standard bar only recently obtained from England by the Department. Mr. Langmuir has also had a party out selecting and erecting new signal-stations for extension purposes in the Auckland District after they had been examined and approved by himself. (For further particulars of this see Appendix III.)

STANDARD SURVEYS.

The necessity for this class of work arises primarily from the fact that very often the original surveys were not carried out with the accuracy that is necessary to ensure the definition of present-day titles. This, of course, is largely accentuated by the high value now placed on town and suburban holdings. Land that could probably have been purchased sixty or seventy years ago for a mere trifle has now reached as high as £1,200 per foot. It will thus be readily understood that surveys in connection with such land require to have values of length standardized to a scientific fineness in order to check and keep under proper control the different Land Transfer operations which come under the supervision of the Chief Surveyors in the district survey offices throughout the Dominion. The difficulties are increased by the fact that in our larger cities and towns where the money value of property is the highest most of the original survey marks are gone, and the surveyor has often greatly to depend on other evidences on which to reproduce the alignments of the city, originally surveyed perhaps three-quarters of a century ago. A standard survey is therefore really a great mathematical problem laid down in our streets with the greatest accuracy obtainable with scientific instruments, and is of such a character as to provide a thorough crucial test to every survey that connects with it. In the City of Auckland at the present time standard lines are being measured to the two-hundredth part of a link, whilst the same character of work is being carried out in the cities of Wellington, Nelson, and Dunedin. The local bodies in each centre are contributing to the cost of such work, they being chiefly interested in the delimitation of the streets, &c. The larger amount of this class of work has been carried out in the City of Auckland and suburbs under the supervision of Mr. John Langmuir, Inspector of Surveys, who has associated with him Mr. H. M. Kensington, District Surveyor. The latter officer is now carrying on the major part of the field-work, as Mr. Langmuir has been giving his special attention to base-line measurements in connection with the new major triangulation of the North Island.

All the standard survey work of the City of Auckland has been completed, according to the boundaries as they existed at the commencement of the work. Since then, however, four new streets have been formed, and a standard and alignment survey made of these.

The field-work of the standard survey of the Borough of Parnell has been completed, and the plans, which are well forward, only wait the final determination of the alignments. In connection with this work fifty-three large scale offset plans of seventy streets have been drawn. This borough has now become merged in the City of Auckland.

Two valuable index plans of the Auckland standard survey have been drawn by Mr. Jarman, whose neat and careful draughtsmanship at the age of nearly fourscore years reflects the greatest credit to him. These have been photo-lithographed.

The field-work for the Auckland suburban standard survey has been completed along certain roads, necessitating a total chainage of 33½ miles and the insertion of 259 standard blocks.

Otahuhu standard survey: All preliminary offsets and ranging are now complete upon this work, in addition to which 92 chains of permanent offsets have been taken.

Mr. J. D. Climie, Inspector of Surveys, reports that the plans of the Hutt – Emerald Hill standard traverse were plotted and finished, and will be found of great use in checking future surveys.

Mr. W. T. Neill, District Surveyor, continues to make good progress with the standard survey of the City of Dunedin, 28 miles of streets having been traversed and marked during the year, but reports that the weather throughout has been very unfavourable for the work. Mr. Neill is carrying out this important duty with the care and precision that marks everything that passes through his hands. A remarkable feature of this work is the exceptional accuracy of the original survey of the City of Dunedin, executed nearly seventy years ago by the late Mr. Charles Kettle, the first Chief Surveyor of Otago.

Mr. C. Adnam Mountfort, District Surveyor, completed the observations necessary for the determination of true meridian at Ikitara and St. John Park, Wanganui, and has also been engaged upon, and brought to completion in the field, the standard survey of the Borough of Wanganui and the Town District of Gonville.

A standard survey of the City of Nelson has been urgently needed for a long time, and at the completion of the above-mentioned work Mr. Mountfort was transferred thence in the middle of November, at which time the work began. Up to the 31st March he reports that three-eighths of the field-work has been completed, and in conjunction with his operations he has thrown a revised minor triangulation over his work.

Further standard surveys are required all over the Dominion, and quite a dozen surveyors could be profitably employed on this class of work, but the pressure of settlement surveys for the present precludes this most necessary work being attended to.

SETTLEMENT SURVEYS.

The work coming under this head has during the year been pushed on with special vigour, and reaches a total area of completed surveys of 430,651 acres. These are comprised under the different heads as follow: Rural, 409,915 acres; village and suburban, 2,678 acres; Maori Land Board subdivisions, 17,726 acres; town allotments, 332 acres. These will be found, if desired, divided up into their respective districts by referring to the tables dealing with same, and also to the reports by the several Chief Surveyors.

A further area of 50,657 acres situated in the land districts respectively of Auckland, Nelson, Westland, and Canterbury has been topographically surveyed for the purpose of promptly throwing open for selection before final survey. Apart from this a large area has also been completed in the field, but owing to the plans not having been sent in this must come into the work of next year. It is needless to add that the great aim of the Department is to meet the keen demand always existing for suitable settlement land, and the areas quoted above show to what extent the Survey Department has endeavoured to satisfy the call for "more land." To further meet this still unsatisfied want I may state that for the coming year an area of ordinary settlement land reaching a total of 723,621 acres is in hand by staff and contract surveyors, a fair proportion of which has already been completed in the field. This area is spread over the following districts, viz.: Auckland, 220,404 acres; Hawke's Bay, 122,274 acres; Taranaki, 86,843 acres; Wellington, 56,279 acres; Nelson, 102,674 acres; Marlborough, 7,145 acres; Westland, 14,774 acres; Canterbury, 105,440 acres; Otago, 289 acres; Southland, 7,499 acres.

Apart from the above-mentioned areas there will, in the ordinary course of events, be the urgent surveys of land acquired from time to time by the Crown under the Land for Settlements Act. These surveys receive, as I have previously indicated, immediate attention by the Department, and as soon as the purchase arrangements are completed, surveyors are despatched to prepare them without loss of time for opening to the public, all such operations being treated as urgent.

NATIVE-LAND SURVEYS.

The area of Native land surveyed during the year reached a total of 671,343 acres, in 2,755 subdivisions, which is a record for more than twenty years past. This total is made up of 653,617 acres, in 2,714 subdivisions, of Native Land Court surveys, and 17,726 acres, in 41 subdivisions, of Maori Land Board surveys.

The Native Land Court area comprises 44,600 acres, in 378 subdivisions, surveyed by the staff surveyors; 608,090 acres, in 2,314 subdivisions, by contract surveyors; and 927 acres, in 22 subdivisions; by licensed surveyors, who were paid by the applicants.

The Maori Land Board area comprises 15,792 acres, in 37 subdivisions, which was surveyed by the staff surveyors, and 1,934 acres, in 3 subdivisions, surveyed by contract surveyors.

An area of 614,997 acres represents surveys in hand and those waiting survey during the coming year. Out of this total the staff surveyors have allocated to them an area of 187,223 acres, and the contract surveyors 427,774 acres, confined almost exclusively to the districts of Auckland, Hawke's Bay, Taranaki, and Wellington.

The surveys of these lands all materially assist in furthering settlement, although nothing like to the same proportion as do our Crown lands, more particularly those specially acquired for the purpose.

TIDAL SURVEYS.

On the 13th August, 1909, a communication was forwarded from the Lords Commissioners of the Admiralty to the Under-Secretary of State, Colonial Office, on the subject of supplementing the Admiralty Time-tables, which had hitherto been restricted to British and Irish ports, by the inclusion of information respecting certain standard Indian and colonial ports. The Secretary of State, on the 21st August, 1909, addressed His Excellency the Governor on the subject, and on the 21st October, 1909, the Secretary for Marine wrote to the Surveyor-General, and also pointed out the necessity of supplying these tidal predictions for publication in the New Zealand Nautical Almanac. The then Surveyor-General, on the 28th October, 1909, replied to the Secretary for Marine stating that the Department could undertake the work provided the necessary funds were forthcoming, and pointing out that the work of predicting the tides is of a highly technical and laborious nature, involving a large amount of calculation.

This Department had hitherto made no provision either for the harmonic analysis of tidal observations nor for the prediction of tides. As, however, Mr. C. E. Adams, M.Sc., F.R.A.S., Chief Computer, was conversant with the technicalities of the work, and had indeed made a special study of it and of the higher mathematics required, the whole conduct of the tidal survey was handed over to him. Two Computers—Mr. T. G. Gillespie and Mr. J. J. Hay—were appointed, and operations were actively put in hand. There were many initial difficulties to overcome, but these were successfully handled. A complete harmonic analysis of the Wellington and Auckland tides was made, and from the harmonic tidal constants thus derived the tides for these ports were predicted for the year 1912. These tide-tables are published by the Marine Department in the New Zealand Nautical Almanac and Time-tables, and by the Admiralty in the Admiralty Tide-tables. This is the only tidal survey in Australia and New Zealand. The accurate and successful manner in which this important work has been carried out reflects the greatest credit on the officer responsible and the staff employed. Details of the year's operations will be found in Appendix V.

I may mention here that, in addition to his other duties, Mr. C. E. Adams, in connection with his position as Government Astronomer, has spent quite half of his time at astronomical work. The British Antarctic Expedition was responsible for a large portion of his work for the year, the pendulum observations for the determination of gravity both at Christchurch and Wellington by Mr. C. S. Wright requiring much additional astronomical observations of the highest accuracy for this work. Mr. Wright conducted gravity observations at Potsdam before going to the Antarctic, and his observations in the Antarctic and in New Zealand will be checked again by further observations at the base station at Potsdam on his return to Europe.

SURVEY INSPECTIONS.

Although a greater number of survey inspections have possibly been made this year than last, it is very necessary that closer attention should be given to this essential element in our system. Pressure of settlement work has prevented more being undertaken, but something like a hundred inspections have been made, more or less, over the North and South Islands. These have been taken in hand chiefly by Inspectors J. D. Climie and W. J. Wheeler, whilst the district and senior staff surveyors have also largely assisted as occasion required.

In the great majority of cases the work inspected was of a very high order indeed. In some nine or ten instances, however, the surveys were found to be defective and call for further drastic action. As against this it is satisfactory to note that in the case of the better class of surveyor, fortunately still predominant, although the limit of error is fixed at 4 links to the mile for rural surveys, the average error for the Dominion as reported only amounts to 0·75 link per mile.

GOLD-MINING SURVEY.

The number of claims surveyed during the year was forty-one, representing an area of 1,912 acres. Of this area 206 acres, in four claims, situated in the Otago District, was surveyed by staff surveyors, at an average cost of 4·04s. per acre; whilst the balance of 1,706 acres, comprising 1,592 acres in thirty-four claims, in the Otago District, 68 acres in one claim in the Southland District, and 46 acres in two claims in the Auckland District, was surveyed by licensed surveyors and paid for by applicants.

OPERATIONS FOR 1913–14.

Taking into account those surveys that are actually in progress, those contemplated to be taken in hand, as well as those in prospect, there is every indication that the work of the Department for the coming year will, as usual, be a very busy one.

At the beginning of the new year the number of staff surveyors is seventy-nine, of which fourteen are temporary. In addition to these there are ninety-two contract surveyors, which makes a total of 171 surveyors. The work allocated to these is divided up as follows:—

——	Triangulation.	Settlement.	Roads.	Town.	Native Land.
	Square Miles.	Acres.	Miles.	Acres.	Acres.
Staff	4,577·40	696,497	308	12	187,223
Contract	..	27,124	32	2	427,774
	4,577·40	723,621	340	14	614,997

Apart from the foregoing, the cutting-up of estates acquired by the Government from time to time for closer settlement under the Land for Settlements Act will have to be undertaken. There is also the work in conection with the standard survey of the cities and towns that is still being carried on by surveyors specially appointed for the purpose.

The inspections of surveys during the year will have to be carried out with even more vigour than previously.

THE MAGNETIC OBSERVATORY AND MAGNETIC SURVEY.

The activities of the Observatory have been continued during the year in the direction of obtaining the diurnal magnetic curves, the registration of earthquakes, and other observations, and also particularly in the direction of serving as a magnetic base for the late Captain Scott's South Polar Expedition and in co-operating in the magnetic work of Dr. Mawson's Antarctic Expedition.

The equipment of the Observatory has been added to in several ways, notably by the provision of a set of delicate Eschenhagen-Toepfer magnetographs which have been erected at a substation in the Kowai Domain at Amberley for use in co-operation with the expeditions. The Observatory has also received from the British Antarctic Expedition the gift of a valuable set of storage batteries for use in the substation. Weber's apparatus for the determination of the induction coefficients of magnets has also been provided.

Mr. Wright, the physicist of the British Expedition, has emphatically pointed out the importance of the future work of the Observatory in carrying on magnetic observation at the most southerly permanent magnetic station on the globe, because it is to its work that magneticians of past and future expeditions look to enable their observations to be of the fullest and of permanent scientific value. At the same time Mr. Wright has pointed out that the Observatory is at present understaffed. He acknowledges gratefully the great assistance the Observatory has afforded to the expedition.

The detailed report of the Officer in Charge, Mr. H. F. Skey, B.Sc., appears in Appendix VI.

CONFERENCE OF SURVEYORS-GENERAL AT MELBOURNE.

At the invitation of the Government of the Commonwealth of Australia I attended, in company with Mr. C. E. Adams, M.Sc., F.R.A.S., Government Astronomer, a conference of Surveyors-General of the different States of Australia. This was held at Melbourne in May, 1912, and was called together for the purpose of discussing survey matters and associated subjects of great importance, with the idea of bringing about a reciprocity on same between the different States of the Commonwealth and the Dominion of New Zealand. The New Zealand representatives were well received and hospitably entertained in all the States visited. With the exception of West Australia, I visited the Land and Survey Offices of the different States in order to secure information as to their methods, &c., in vogue, and which might be of service to the Dominion. I have given extracts from the report of the proceedings of the conference which may be of interest to the profession in New Zealand. These will be found in Appendix VIII.

I might mention that the Surveyors-General of the Commonwealth of Australia expressed the wish of having a conference of Surveyors-General, to possibly combine with the Surveyors' Boards, in New Zealand during the summer of 1914. There has never been a conference of such bodies in this Dominion, whilst meetings have taken place in several of the States of the Commonwealth. There are still important remits to be considered from the conference held in London on the 31st May, 1911, at the Surveyors' Institution, Westminster, on the question of reciprocity throughout the Empire in the examination and authorization of surveyors, and I would strongly recommend that these be dealt with, along with other scientific subjects, at a conference proposed to be held in this Dominion about the time suggested, and that our Government be asked to grant facilities for such a gathering. The Empire's oversea dominions of Canada, South Africa, Australia, and New Zealand are all interested in this work, and it would be a compliment to this Dominion if the Australasian Section held its meeting in New Zealand.

DEPARTMENTAL CHANGES: PROMOTIONS, TRANSFERS, ETC.

The following changes consequent on my promotion from Chief Surveyor and Commissioner of Crown Lands, Wellington, to the position of Surveyor-General of this Dominion at the beginning of the year have taken place.

Mr. T. N. Brodrick, Chief Surveyor and Commissioner of Crown Lands for Canterbury, was promoted to succeed me at Wellington. Mr. C. R. Pollen, Chief Surveyor and Commissioner of Crown Lands for Hawke's Bay, was promoted to a similar position in Canterbury, while Mr. R. T. Sadd, in the same capacity, was appointed to take his place. Mr. F. A. Thompson, Chief Draughtsman at Napier, was promoted to be Chief Surveyor and Commissioner of Crown Lands at Nelson, while Mr. H. Mackay, Land Transfer Draughtsman at Wellington, was promoted to succeed him at Napier. Mr. John Cook, Land Transfer Draughtsman at New Plymouth, was promoted to the Wellington branch, his position being taken by Mr. F. J. Harrop, of the Napier office. Mr. R. S. Galbraith, Inspecting Surveyor, Auckland, was promoted to be Chief Draughtsman at Invercargill.

Other changes were as follow:—

Head Office: Mr. H. E. Girdlestone, who has been engaged on triangulation work, was returned to the staff of the Wellington District office consequent on the special need for settlement-survey work. Mr. K. M. Ballantyne, draughtsman and computer, resigned, and Mr. E. S. Wood, draughtsman, was transferred to Invercargill. During the absence on sick-leave of Mr. H. T. McCardell, Chief Draughtsman, for a period of three months during the year, his duties were efficiently carried out by Mr. H. A. R. Farquhar.

Auckland office: Three draughtsmen—viz., Messrs. R. Covil, J. Sims, and W. Scanlen—retired on superannuation. Five temporary draughtsmen were appointed—viz., J. R. Page, L. E. Martin, C. Acton, M. W. Haworth, and W. Moore; also one draughtswoman, Miss D. Warner. Messrs. W. S. Walker, F. A. Gainsford, and H. C. Hooper, temporary draughtsmen, resigned. The following draughting cadets were appointed—viz., A. C. Haase, H. M. Lawrey, A D. Bines, L. B. Freeman, and B. Hutton.

Napier office: Mr. F. R. Burnley, assistant surveyor, was transferred to Auckland, and Mr. George Duncan, for many years in charge of the safe, retired from the service.

New Plymouth office: Mr. R. R. Richmond, temporary surveyor, was transferred to Canterbury.

Wellington District office: Mr. W. M. Gray, staff surveyor, was transferred to the Hawke's Bay District, as also Mr. Olsen, unlicensed surveyors' assistant. Mr. H. L. P. Dyett, staff surveyor, resigned to take up private practice. Mr. R. F. W. Mackenzie passed his surveyors' examination and was thence transferred to the field in the Auckland District. Messrs. L. W. B. Hall and N. A. Middlemas were transferred from the office staff to positions on the field staff in the Auckland District.

Nelson office: Mr. P. R. Wilkinson, temporary surveyor, was transferred to Auckland, Mr. S. Parkinson, surveyor and draughtsman in the office, taking his place in the field. Mr. E. A. Ingram, draughtsman, was transferred to Hokitika.

Blenheim office: Messrs. A. Hodgkinson, District Surveyor, and L. Hunt, temporary surveyor, were transferred temporarily for urgent work to the Auckland and Canterbury districts respectively.

Hokitika office: Mr. H. G. Bateman, temporary draughtsman and computer, resigned. Mr. J. R. Clements, draughtsman, was transferred to the Wellington District office. Mr. J. Fitzsimmons was appointed draughting cadet.

Christchurch office: Mr. A. G. Allom, District Surveyor, resigned in October. Mr. W. E. Taylor, temporary draughtsman, was transferred to the Napier office. Mr. R. T. Burgess, cadet, was transferred to the field staff of the Wellington District. Mr. H. W. Harris, draughting cadet, resigned.

Dunedin office: Mr. C. E. Pfeifer, draughtsman, was transferred to the Napier office.

Invercargill office: Mr. S. Robinson, Chief Draughtsman, was transferred to the Christchurch office. Mr. S. T. Seddon, survey cadet, was transferred to the Wellington District office.

OBITUARY.

During the year death has removed another small band of surveyors from among us, viz.,—

Francis Simpson, late Chief Surveyor and Commissioner of Crown Lands at New Plymouth. He was born at Lancaster, England, in the year 1846. At the age of seven he arrived with his parents at Auckland, where he was educated at the Wesley College and at the Church of England Grammar School. As a young man he served in the Maori war, and held a commission in the 2nd Waikato Regiment. In the year 1875 he joined the Survey Department at Gisborne as a District Surveyor, which appointment he held till 1892, at which time he was promoted to be Chief Draughtsman at the Napier office. In the year 1904 he was promoted to be Chief Surveyor and Commissioner of Crown Lands at New Plymouth, and filled this position with credit until his retirement on superannuation in 1911, after thirty-six years of faithful work in the service of the Department. Amongst other positions held by him in Taranaki were those of Chairman of the Mount Egmont Domain Board, member of the Board of School Commissioners, whilst he also was a member of the North Island Representation Commission for the adjustment of the electoral districts. Throughout Taranaki and other parts of the Dominion he was well known and held in high esteem. Owing to continued illness, his death, which took place on the 23rd April, 1912, at New Plymouth, was not unexpected.

Edward James Campion: This surveyor—a type of the older class—was one of the landmarks amongst the New Zealand profession. He entered the service of the Provincial Government of Wellington during the fifties, and executed a large number of surveys of all kinds. Subsequently he went into private practice as a licensed surveyor, and in later years was from time to time employed by the General Government as surveyor and draughtsman. Mr. Campion was well known, particularly in the Wellington District, and his happy and cheerful disposition gained for him a large circle of friends, especially amongst the earlier settlers in the country districts. His death was reported from Gisborne.

John Reay Mackay: This well-known Taranaki surveyor died at New Plymouth after being in failing health for a considerable time. He was a son of Mr. Joseph Mackay, formerly principal of the Wellington Boys' College. His sphere of work lay chiefly in the country districts between Hawera and New Plymouth, and was generally confined to private practice. In all his work he was recognized as a conscientious and painstaking surveyor. Throughout the Taranaki District, where his sterling qualities were so well known, his death will be felt by a large circle of friends both in the profession and out.

John Tiffin Stewart, M. Inst. C.E.: Since the end of our survey year this well-known and experienced engineer and surveyor passed away on the 19th of April, 1913, at the ripe age of eighty-five years. He was a native of Scotland, where he obtained his credentials as a civil engineer. During the fifties he joined the survey staff of the Wellington Provincial Government, and in the early sixties was a leading District Surveyor, conducting many important surveys particularly on the west coast of the province. Later on he became Provincial Engineer, and after the inception of the late Sir Julius Vogel's public-works policy in 1870 by the General Government Mr. Stewart was appointed District Engineer for the West Coast District of Wellington with his headquarters at Foxton. In his new capacity the construction of the present railway-line from Foxton to Palmerston North (then only a tramway-line) was one of the first important works which came under his supervision. This and other works carried out by him at this period have clearly shown what value his undoubted ability has been to the Dominion. The engineering work, however, on the Wanganui River, which was carried out by him in an honorary capacity, is such as will always stand as a lasting monument to his professional skill and indefatigable energy. In this work he so successfully combated the wild forces of nature and so controlled and utilized the waterfalls and rapids of New Zealand's Rhine as to provide a safe waterway through reaches of unsurpassing beauty and grandeur. The engineering skill that he displayed here was such as to call forth high commendations from his professional *confrères* and others. The result is an immense gain to the Dominion annually of thousands of tourists from all quarters of the globe, who are enabled to visit these scenes of loveliness with safety that in earlier days were always fraught with danger. In 1889 Mr. Stewart retired into private life at Aramoho. His energy, however, and public spirit were such that even in his retirement it is said he crowded more work than some men show while still in harness. Notwithstanding his unassuming and retiring nature, all organizations in Wanganui for the advancement of art and science—viz., the astronomical, orchestral, arts and crafts, beautifying societies, as well as the Museum trustees—found in him a ready and financial supporter. To all of these he gave his time and talents ungrudgingly. From all parts of the community where he lived during his retirement, and elsewhere, come the many expressions of profound regret at his death, and which clearly voices the universal respect and honour in which he was so justly held and esteemed.

George Mackenzie: News is to hand that Mr. George Mackenzie, one of the oldest and most respected of our authorized surveyors, has joined the great majority. He was born in Kinross-shire, Scotland, in 1839. In the year 1857 he came out to Dunedin, and, studying first under the late Mr. Alex. Garvey, District Surveyor, Otago, and then under Mr. Mountfort, sen., he shortly afterwards qualified as a surveyor and followed that profession. In 1863 he was appointed Assistant Surveyor in the service of the Otago Provincial Government. Later on he was promoted to District Surveyor, and finally retired from the service in 1909. In his time Mr. Mackenzie conducted many very important surveys in Otago. During his long career as a pioneer and settler he had to face the difficulties associated with early settlement and the building-up of a new country. He was a man of the very highest integrity of character, and imbued at the same time with strong religious feelings. During his later years he was closely connected with evangelical and mission work. His death took place at Queenstown on the 1st June, 1913, at the ripe age of seventy-four years; and so passed away one universally esteemed and respected, and who in his every walk of life faithfully fulfilled his part to the last both as a man and a Christian.

Captain J. D. R. Hewitt, R.N.: This gentleman, who was another well-known figure in connection with the survey profession, passed away on the 10th July, 1913, at Palmerston North, in which town he had been resident for many years. After leaving the Royal Navy he joined the Provincial Government Survey staff in Wellington as Surveyor and Chief Computer about the year 1873, continuing afterwards in the service of the General Government. His special work was largely on the scientific side, and together with the late Mr. Henry Jackson, F.R.G.S., a former Chief Surveyor of the Wellington District, he took part in scientific and astronomical research work, and was one of the observers of the Transit of Venus in 1882. After retiring from the Service he followed farming pursuits successfully in the Fitzherbert district, where he took up a large area of forest country. In his day he was one of the ablest men from a scientific and mathematical standpoint that the Department had. In addition to this his sterling uprightness of character always commanded respect, and, whether in his capacity as a Royal Naval officer or Dominion surveyor and scientific computer, he served his country faithfully and well. As churchman and settler he also deservedly received the respect and esteem of his fellow-citizens, a large number of whom will regret the loss occasioned by his death.

Conclusion.

I have personally inspected and reported on all the district and sub offices in the Dominion with the exception of the Wellington and Blenheim offices and sub-offices of Hamilton and Wanganui. Survey matters were discussed with the officers in charge at various centres, and when opportunity offered I visited the staff surveyors in their respective camps. I also inspected Crown and land-for-settlement blocks in advance of their being offered for selection. My visit in dealing with the above extended from the Bay of Islands in the North to Foveaux Strait in the South, and included the east and west coast districts of both Islands.

I have to thank the survey officers of the Department—senior and junior alike—in both the head and district offices of the Dominion for their zealous, ready, and willing co-operation with me throughout the year that has closed.

James Mackenzie,
Surveyor-General.

APPENDICES.

APPENDIX I.—SURVEYS.

AUCKLAND.

Minor Triangulation.—The staff surveyors executed 40,750 acres, costing 0·8d. per acre, in Rotorua, Waitemata, and Kawhia Counties.

Topographical.—An area of 11,369 acres, costing 5·16d. per acre, for the Native Land Court, was surveyed by one of the staff surveyors. There is also an area of 23,555 acres of Crown land in the hands of staff surveyors (opened on scheme plans), the cost of which is carried forward to the completion of the survey.

Rural.—133,249 acres were surveyed during the year, comprising 115,442 acres, costing 1·45s. per acre, by the staff surveyors; 11,713 acres, costing 1·95s., by contract surveyors; and 6,094 by private surveyors, the cost of which is not available.

Village and Suburban.—2,352·2 acres in 111 subdivisions by the staff surveyors, costing 3·28s. per acre, and 1·3 acres in 4 subdivisions by private surveyors, costing 129·23s. per acre.

Town Section.—The staff surveyed 209·8 acres in 322 sections, costing 32·91s. per section, and private surveyors 5·5 acres in 8 sections, costing 70·88s. per section.

Native Land Surveys.—The total area surveyed under this heading is 442,948 acres, in 1,732 subdivisions. The staff surveyed 33,921 acres in 214 subdivisions, costing 19·61d. per acre, for the Native Land Court, and 3,292 acres in 12 subdivisions, costing 37·81d. per acre, for Maori Land Boards. Licensed surveyors accounted for 402,963 acres in 1,489 subdivisions, costing 16·77d. per acre, for the Native Land Court, 1,902 acres in 3 subdivisions, costing 28·98d. per acre, for Maori Land Boards, and 870 acres in 14 subdivisions for the Native Land Court, for which they were paid privately.

Gold-mining Surveys.—A private surveyor completed 2 claims, containing 46 acres, the cost of which is not available.

Roads, &c.—The staff executed 108·5 miles, at an average cost of £21·33 per mile.

Other Work.—Miscellaneous surveys, reports, repegging, inspections, engineering surveys, &c.

Inspections.—Thirty-six inspections of surveys have been made, and Mr. W. J. Wheeler, Inspecting Surveyor, reports that, with two exceptions, all the work tested was of a decidedly higher standard than surveys of former years.

Traverse Closures.—Taking 69 average closures by the staff surveyors, totalling 140·4 miles of chainage, a mean close of 0·54 of a link on meridian and 0·56 of a link on perpendicular per mile is obtained.

Contract Surveys.—Private surveyors have on hand 7,809 acres of Crown land, 300,010 acres of Native land, and 26 miles of roads, principally deviations.

Office-work.—Land Transfer Branch: 781 plans of 6,417 allotments, containing 197,716 acres, were passed, and 1,279 traverse sheets examined, 169 tracings prepared, and 35 plans compiled. Mr. A. B. Harding, of Land Transfer Office, indorsed 3,433 plans on certificates of title, &c., and made 25 tracings and plans.

Native Land Surveys Branch: 373 plans examined and approved, containing 375,522 acres in 1,271 subdivisions; 56 plans compiled and 219 tracings prepared; 1,285 Court orders indorsed on certificates of titles, &c.; 200 applications to Wellington for financial authority, and 374 authorities to survey issued; 11 Native Land Courts were attended, £1,120 16s. 6d. survey liens collected, and 212 charging-orders obtained, and 12,899 acres of land taken in lieu of survey costs; £21,338 6s. 3d. survey liens received.

Legislation (Roads, &c.) Branch: 261 plans of roads taken and closed (343 miles); 2,327 acres passed; 18 railways plans (71 miles, 852 acres); 45 plans proclaiming 3,225 acres for various purposes were examined and passed; 293 plans entered on all records, 24 plans compiled, and 221 tracings prepared.

Computing Branch: 191 plans, containing 211,964 acres of Crown land in 1,112 sections, were examined and passed; 3 mining plans and 2 residence-sites (mining) were examined and forwarded to Warden (these involved the examination of 518 traverse sheets and 78 connecting triangle sheets); 336 chain lengths surveyors' steel tapes were tested and certificates issued; 989 tracings for posters, selectors, surveyors, &c., were prepared. Applications for loans amounting to £22,410, on 19 blocks containing 66,745 acres, were prepared.

General: Fees collected, £339 19s. 3d.; 4,075 plans were indorsed on Crown grants, &c. The total number of plans passed by this office was 1,674; plans compiled, 115; tracings &c., made, 1,598, and 8,693 plans indorsed on titles, &c.

Proposed Operations, 1913–14.—Twenty-seven surveyors (twenty-one staff, and six temporary) have on hand 212,595 acres of Crown land, 100,187 acres of Native land (54,571 acres of which is for Maori Land Boards), and 157 miles of road surveys. In addition to the above the larger areas of Crown land and new purchases proposed to be surveyed for selection are as follows: Mangonui County, 11,800 acres, including 10,900 acres national endowment; Whangaroa County, 2,900 acres; Bay of Islands County, 49,000 acres, including 24,000 acres national endowment; Hokianga County, 17,000 acres, including 11,000 acres national endowment; Hobson County, 1,000 acres, national endowment; Whangarei County, 6,200 acres, including 3,800 acres national endowment; Otamatea County, 5,100 acres, including 3,200 acres national endowment; and 1,400 acres, balance Bickerstaffe Settlement; Rodney County, 1,100 acres; Waitemata, 6,600 acres, including 1,700 acres national endowment; Kawhia County, 21,000 acres; Awakino County, 8,000 acres; West Taupo, 30,000 acres; Waitomo County, 13,800 acres; Waikato County, 7,800 acres, including 6,400 acres national endowment; Ohinemuri County, 8,800 acres; Tauranga County, 8,000 acres, comprising 3,000 acres national endowment and 5,000 acres land for settlement; Matamata County, 20,300 acres, including 2,300 acres national endowment; Rotorua County, 10,000 acres; East Taupo, 4,600 acres, including 3,000 acres national endowment; Whakatane County, 3,000 acres; Opotiki County, 52,000 acres, including 20,000 national endowment.

Accounts.—Mr. David Smith, Accountant, reports that the number of vouchers which passed through the books for the year amounted to 3,061, for an expenditure of £85,498 19s. 5d. 2,404 vouchers, representing an expenditure of £49,545 12s. 6d., were paid from Imprest Account by 2,876 cheques; while 657 vouchers, for an expenditure of £35,953 6s. 11d., were sent to Wellington for payment direct from the Treasury. On Official Account 1,229 cheques were issued for an expenditure of £16,626 3s. 10d. Under the Public Works Fund advances amounting to £2,740 17s. 3d. were made to the settlers on improved-farm settlements, while £1,085 2s. 8d. was expended on the purchase of stock for the settlers.

Transfers, &c.—The field staff has been augmented by means of transfer and new appointments by eleven officers. Mr. R. S. Galbraith, Inspecting Surveyor, was promoted to be Chief Draughtsman at Invercargill. Five draughtsmen resigned and eight new appointments were made, being a net increase of three. Five draughting cadets were also appointed.

Conclusion.—The work passing through the office still shows an increase, and it is very difficult to keep the current work going and also satisfy the public on the present staff. The increased volume of work in field and office can only be met by additional draughtsmen, which are urgently required, and the question of the increased accommodation necessary is also brought under your consideration. I have to thank the officers, both field and office, for their unremitting efforts during the year, which has been an exceedingly arduous one.

H. M. SKEET,
Chief Surveyor.

HAWKE'S BAY.

Minor Triangulation.—An area of 56,823 acres of this class of work was executed during the year for the purpose of controlling sectional surveys. Owing to the stress of work surveying land for settlement, it has been impossible to execute any more of this class of work than was absolutely necessary, although the triangulation in this district is in a bad state, and requires a thorough revision to bring the triangulation in various parts of the district executed on different units of measurements into unison, and to agree with the Imperial standard.

Topographical Survey for Selection.—Although nothing has been returned under this heading, a good deal of preliminary topographical work was done on the Sherenden and Waihau Settlements in order to provide a scheme of roading and subdivision for approval before the execution of the final survey, the cost of which will be included in the sectional survey.

Rural.—The work executed during the year consisted principally of four blocks situated in the Survey Districts of Takapau, Patoka, Tutamoe, Runanga, Heruiwi, Porangahau, and Tautane, and comprised an area of 70,098 acres, at an average cost of 0·88 of a shilling per acre. Of this area, 57,035 acres was executed by contract surveyors, at an average cost of 0·82 of a shilling per acre; while the balance of 13,063 acres was executed by contract surveyors, at an average cost of 1·15s. per acre. Included in the 57,035 acres is an area of 50,683 acres representing the Pohokura Block, situated in the Runanga and Heruiwi Survey Districts, and surveyed by Mr. H. E. Walshe. This block lies in the Auckland Land District, and though surveyed by one of the Hawke's Bay staff on account of its being more easily worked from this district, it has to be returned in the table for the former district. This leaves the total portion for the Hawke's Bay District to stand at 19,415 acres, at an average cost of 1·73s. per acre. The 4,900 acres surveyed by Mr. J. Roddick is a subdivision of two small grazing-runs..

Town Surveys.—Only 2·31 acres was executed under this heading, in eight lots, at a cost of 103·52s. per acre.

Village and Suburban.—Ninety-five lots were laid off, containing 39·13 acres, at a cost of 77·98s. per acre.

Native Land Surveys.—The total area surveyed by the staff was 14,913·56 acres, at a cost of 20·53d. per acre, in 58 subdivisions, all in small lots with the exception of Tutaekuri No. 1, 12,500 acres (Maori Land Board subdivisions), in 25 lots, and Kohotea West, 1,598 acres, in 2 subdivisions (Native Land Court). The area surveyed by licensed surveyors was 28,879 acres, at a cost of 24d. per acre, and comprised 28,847 acres for Native Land Court and 32 acres for Maori Land Board.

Roads.—A length of 17·90 miles was surveyed under this class, nearly all in short lengths, to gives access to blocks being subdivided; average cost, £18·81 per mile.

Other Work.—Nearly half this amount was incurred in the Gisborne office as general departmental work; the balance consists of miscellaneous duties, such as minor surveys, inspections, reports, &c.

Field Inspections.—Nine field inspections were made by Messrs. T. Brook, Land Officer and Inspecting Surveyor, T. Cagney, and W. M. Atkinson, which were, with one exception, satisfactory. Several inspections were made by Mr. J. D. Climie, Inspector of Surveys, which were not altogether satisfactory, and demonstrate the necessity for every surveyor's work, whether staff or private, being inspected in a systematic manner at least once a year.

Work in Progress.—The following are the principal surveys in hand: Sherenden and Waihau Settlement, 26,740 acres, completed in field and plans in progress. Huiarua Block (national endowment): Area surveyed and returned 7,597 acres, comprising small grazing-run No. 98 of 2,697 acres, and the balance in four sections under renewable lease. This block was originally cut up into three small grazing-runs by Mr. Farnie in the year 1910, and no alteration has been made in the area of small grazing-run No. 98. Improved road-access is being surveyed through freehold about three miles in length, and arrangements being made for legalization. The Mangairoa Block, 18,000 acres, and Omahu No. 2, 2,500 acres (Native Land Court surveys), are completed in field, and the plan of Omahu is well on towards completion; also the Native Land Court survey of Wharekahika Block, 40,500 acres, nearly completed in field, is delayed for the hearing of an appellate case.

Proposed Operations, 1913–14.—Mr. E. H. Farnie, District Surveyor, has in hand the Kaiwaka Block (Crown lands), 14,483 acres. Mr. J. Roddick is to execute the survey of the northern portion of the Waipaoa Block, 12,000 acres, recently purchased from the Natives. Mr. H. E. Walshe, Tahoraite No. 2 Block, 1,000 acres, and supervision of unlicensed assistant's survey of Otawhao Block, 2,357 acres (well in hand), and later Omahaki and Timahanga Blocks, 33,000 acres. Mr. T. Cagney is to complete Mangawhariki Block, Native Land Court survey, 7,100 acres, and take in hand preliminary survey of Tahora Block, Crown lands, 49,000 acres. Mr. W. M. Atkinson: 6,000 acres Crown lands, Waikaremoana, and southern portion of Waipaoa Block of 12,000 acres mentioned above; also supervision of 8,568 acres Crown lands, being executed by an unlicensed assistant working under a permit issued by Mr. W. M. Gray; the latter is, I regret to say, laid up at the Wairoa Hospital with an attack of appendicitis, and will be incapacitated for several months. Private surveyors, under 48 authorities for survey, have in hand the subdivisions of 32,865 acres requisitioned for by the Native Land Court.

It was found necessary during last year to increase the staff by the employment of two more Assistant Surveyors and three unlicensed assistants in order to cope with the survey of the Sherenden and Waihau Settlements and other surveys; since the completion of the field-work of the above estates, one Assistant Surveyor and one unlicensed assistant have been transferred to Auckland.

Transfers.—I was transferred from Nelson to Hawke's Bay as from the 1st June, Mr. C. R. Pollen taking charge of Christchurch. Mr. F. A. Thompson, Chief Draughtsman, was promoted to the position of Commissioner of Crown Lands and Chief Surveyor at Nelson, and was succeeded by Mr. H. Mackay. Mr. E. H. Farnie was transferred from Gisborne to Napier in order that there should be a District Surveyor at Napier, and Mr. T. Cagney took his place at Gisborne. Mr. F. R. Burnley, Assistant Surveyor, was transferred to Auckland on the 25th February.

This last year has been characterized by greatly increased activity both in land settlement and survey work, and I have to commend the staff on the admirable way in which they have carried out their duties by using their best efforts to push on with the work so as to further the settlement of the land.

Robt. T. Sadd,
Chief Surveyor.

TARANAKI.

Minor Triangulation.—An area of 46,400 acres in the Mapara, Ohura, and Rangi Districts, &c., has been completed, at a cost of 1·63d. per acre, to control settlement surveys in hand.

Rural.—A total of 41,936 acres under this head has been completed, in 176 sections, at a cost of 3·59s. per acre, most of which is situated in very rough forest country, some 3,700 acres of it being scenic reserves with long rough boundaries enclosing small areas. An additional 45,693 acres has been completed in the field, and plans plotted sufficiently to allow of sale maps being issued shortly.

Village and Suburban.—76·75 acres, in 14 lots, was surveyed in Tahora and Whangamomona, at a cost of 34·55s. per acre, the roading, owing to the nature of the country, being very expensive.

Town Section Surveys.—An area of 42·75 acres, comprising 82 lots in the Tahora and Whangamomona Townships, at a cost of 36·34s. per allotment, was surveyed.

Native Land Court Surveys.—The total area of Native land surveyed was 51,311 acres, into 96 subdivisions, at a total cost of £3,219 8s. 1d., or 15·05d. per acre. Of this amount, the staff surveyed 3,746 acres (2 subdivisions), costing £390 9s. 11d., or 25·01d. per acre, and private surveyors completed 47,565 acres (94 subdivisions), costing £2,828 18s. 2d., or 14·27d. per acre. The above areas were contained on 77 plans received for examination, 67 of which were approved. Of these plans, 33 were received on account of authorities issued during the year, and 44 were received for authorities issued prior to the 1st April, 1912. Seven plans received for examination prior to the 1st April, 1912, and 1 plan, compiled in the office, have also been approved during the year. Forty-two authorities were issued under the Native Land Act, 1909, for surveys covering 93 subdivisions of a total area of 53,724 acres, at an estimated cost of £3,340. Fifty-one subdivisions, of a total area of 26,040 acres, representing 51 autho-

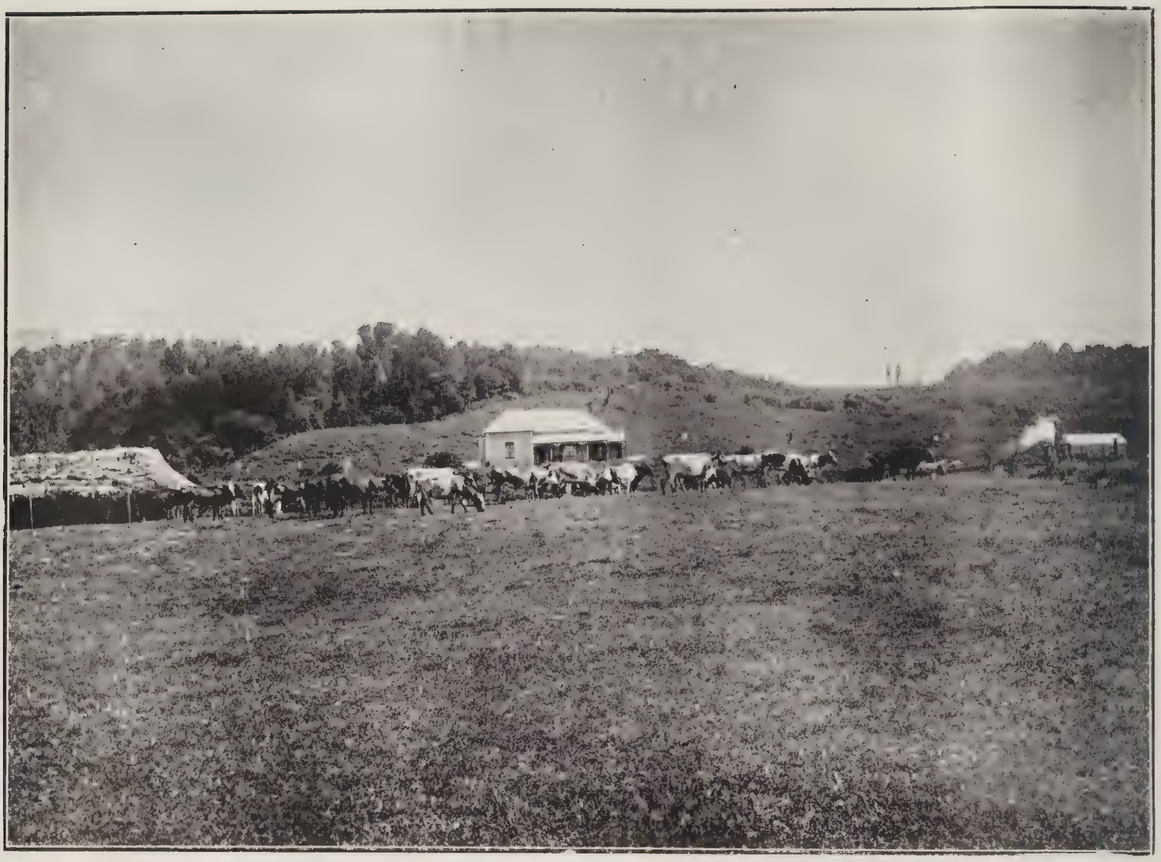
[H. E. Girdlestone, photo

A Reach on the Manganui-a-te-ao Valley.

[R. Leckie, photo

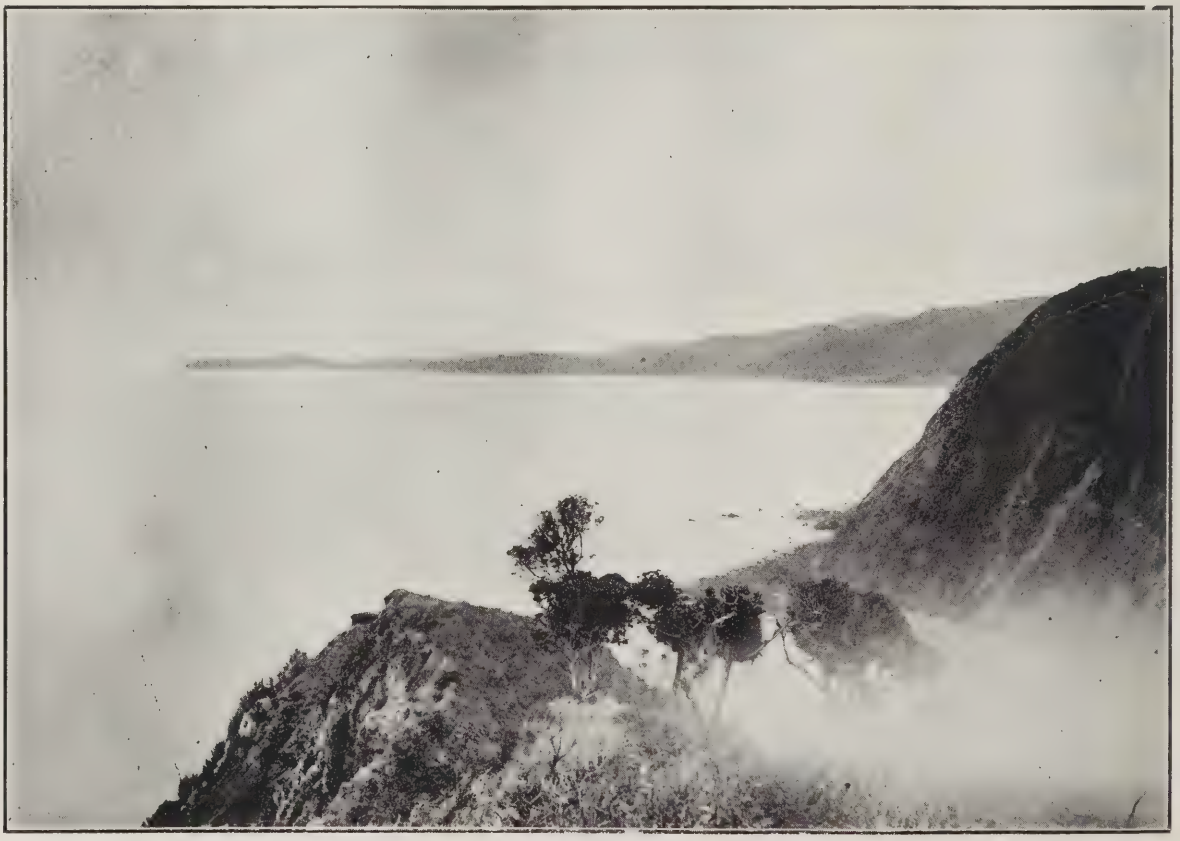
Settler's Home, Whareorino (Second Year), South of the Marakopa River

To face p. 12.]



[R. Leckie, photo.

Settlers' Homes on Te Kuiti–Awakino Road.



[R. Leckie, photo.

View of West Coast, North Island, from Moeatoa, looking towards Kawhia.

rities, are now under survey and will be completed at an early date; 6 requisitions, representing 40 subdivisions, of a total area of 52,071 acres, are now being dealt with, and authorities will issue shortly.

Maori Land Board Surveys.—Authority was issued to a private firm of surveyors for the subdivisional survey of one block, containing 6,316 acres, for leasing purposes, and was the only survey dealt with under this branch during the year. A scheme plan has been submitted and approved by the Board, and the field-work is now well in hand.

Roads.—In this class 8·68 miles were completed by the staff at a cost of £342 3s., or £39·42 per mile, most of it being done in very rough and precipitous country, as a specially urgent job in bad weather in winter.

Inspections.—Only two inspections of surveys have been made during the year, one of a Land Transfer survey inspected by Mr. T. G. Sole, and one of a Native survey close to Taumarunui, inspected by District Surveyor Mr. N. C. Kensington. Had time and opportunity allowed, I fully intended to myself inspect the contract surveys in upper Waitara and several important Native and Land Transfer surveys.

Other Work.—The expenditure under this head amounts to £143 9s., and includes inspections, preliminary scheme and inspection of a block of 6,000 acres of Crown lands intended for the Wanganui River Trust, and small miscellaneous surveys done by the office surveyor and Mr. Kensington.

Chainage Closures.—The mean of all closures returned by the staff, mostly in rough bush country, gave an average of 0·9 of a link per mile.

Office-work.—The total number of plans checked under all heads in the ordinary Survey Branch was 159, with 424 traverse sheets. These covered 391 sections of a total area of 78,918 acres, and 22 miles of roads and railways taken and closed. Of these, settlement surveys of Crown lands were represented by 14 plans, containing 177 subdivisions of a total area of 26,889 acres; 33 plans defining 22 miles of roads and railways taken and closed; 75 Native Land Court plans of 39,303 acres in 93 sections; 32 miscellaneous plans of 83 subdivisions, containing 5,206 acres; 4 office compilations of 7,516 acres in 15 sections; and 1 township plan of 4 acres in 22 sections. Four men sat for examination as authorized assistants, and three passed.

Land Transfer.—In this branch 132 plans, with 158 traverse sheets, were checked and approved, covering 383 sections and subdivisions of an area of 8,893 acres; in addition, 4 plans, comprising 30 subdivisions and containing 10,989 acres, previously checked by the other branch, were examined and approved for Land Transfer purposes. Land Transfer record maps are badly needed to replace our present system of bound tracings.

Titles.—The plans placed on instruments of title of all kinds were 1,922, and 425 copies of leases and licenses were prepared.

Compilations.—For photo-lithography 12 large drawings and tracings were prepared and 2 new 40-chain and 2 new 20-chain record maps were made, besides supplying the necessary tracings to the Head Office to compile a plan of the enlarged borough of New Plymouth. The old 2-mile map last printed from in 1906 was brought right up to the end of March, 1913, and sent on for publication, while the Head Office county maps of Waitomo and Ohura were examined and brought up to date. A special book of mounted lithos with index map of all the forest lands was prepared for the Forestry Commission, also special maps for the Railway Commission and other Commissions dealing with the enlargement of boroughs, &c.

Miscellaneous.—The usual demands made on the office staff were attended to, comprising the supplying of information to the general public, tracings for Rangers (including 87 corrected tracings from approved plans of improved-farm sections) and selectors; 35 complete sets of field data were supplied to staff and contract surveyors; plans for road and scenery Proclamations numbered 94. For the Valuer-General 150 tracings were made, while the total of tracings for selectors, Rangers, road, scenery, &c., numbered 377. All recording on block sheets already made on road, Crown grant, 40-chain record maps, reserve, index, and land-tenure and wall maps was kept well up to date, and the usual map-mounting attended to.

Native Land Court Work.—During the year 82 Court orders (in duplicate) have been indorsed with plans and forwarded, covering an area of 48,891 acres. A considerable amount of correspondence has been dealt with in this branch, chiefly with the Registrars of Native Land Courts, owners or lessees of Native blocks, or solicitors acting for clients interested. The sum of £2,341 11s. 11d. has been collected from the owners or lessees of Native lands in payment of survey charges, &c., where costs were previously advanced by the Crown. When considered necessary, an officer of this Department has attended sittings of the Native Land Court for purposes of obtaining charging-orders against Native blocks, collecting survey fees, &c. Nine tracings were made for Native Land Court purposes. Vouchers for payment to surveyors for surveys completed have been prepared, and all detail work necessary has been attended to.

Proposed Operations for 1913–14.—A staff of four permanent surveyors, with one cadet, one temporary assistant surveyor, and one contract surveyor are at present engaged upon settlement surveys along the eastern, north-eastern, and north-western boundaries of this land district, and it is now proposed to add thereto at least two other contract surveyors upon similar work. The total area to be covered by these operations amounts to 86,843 acres, of which an area of 45,693 acres is completed in the field, and litho tracings of most of this for the issue of sale maps have been prepared therefrom and sent to Wellington, thus leaving 41,150 acres of new country to be surveyed before the 31st March, 1914, situated in the Mapara, Aria, Tangitu, Waro, Mimi, Mahoe, and Omona Survey Districts.

Transfers.—Mr. John Cook was promoted in June to be Land Transfer Draughtsman in Wellington, and Mr. F. J. Harrop was promoted from Napier to fill his place here. Mr. R. R. Richmond, of the temporary field staff, was transferred to the Canterbury District in October.

In conclusion, I have to commend both the field and office staffs as a whole for the manner in which they have attended to their work. The field staff had the disadvantage of very wet weather in the early part of the year, and in some cases a difficulty in getting suitable hands for the field parties. The office staff could well stand being increased by an extra draughtsman, and for some time by two. It has not been possible to undertake the compilation of any new block sheets, and the Chief Draughtsman, Mr. H. J. Lowe, has found it difficult at times to meet all the demands from Government Departments, surveyors, and the public for tracings and information.

G. H. Bullard,
Chief Surveyor.

WELLINGTON.

Triangulation.—The secondary triangulation upon which Mr. H. E. Girdlestone, under instructions from the Head Office, has been engaged for several seasons, and which embraces an area of some two million and a half acres, has been very nearly completed. Owing, however, to the exigency of settlement surveys this work had to be stopped at the end of August, when Mr. Girdlestone returned to the field staff of this office. Mr. R. P. Greville, Inspecting Surveyor, had occasion to visit the Hawke's Bay District, and he returns an area of 13,100 acres of minor triangulation consequent upon the inspection of a large block of land preparatory to its being thrown open for settlement. This area, coming as it does within the Land District of Hawke's Bay, appears in the return for that district.

Standard Surveys.—Mr. Mountfort has completed the field-work of the Wanganui standard survey, and received instructions for a rural standard traverse near Feilding not yet put in hand.

Topographical Survey for Selection.—No work coming under this head is returnable this year.

Rural.—An area of 16,814 acres is returned under this heading, of which some 10,000 acres are now in occupation, and the remainder is expected to be taken up within a few months. At the present time six staff surveyors have an area of 56,279 acres of unfinished work on hand, the greater part of which it is expected will be completed next season.

Town Surveys.—Only a few small sections under this heading have been done, and they were pegged off by the Inspecting Surveyor.

Native Land Court Surveys.—The cutting-out of subdivisions of Native land in the manner ordered by the Courts has occupied a number of private surveyors under instructions from the Department, and forms the larger proportion of this year's return. The work is different in character from the surveys of Crown lands, which are cut up into farms with the single purpose of their occupation and use. The subdivision of Native lands, on the contrary, is intended to satisfy the legal necessities of apportionment among a number of owners, without regard to the suitability of the resulting portions for occupation and use. Roading, for instance, is not attended to, and this, the most expensive item of Crown-land surveys, is thus absent from the cost of most Native surveys. One staff surveyor, however, has still a Native block of 14,850 acres on hand, which, owing to the necessities of the district, requires roading independently of the Court subdivisions. The total area of 122,038 acres completed includes an area of 117,545 acres by contract surveyors in a number of blocks which did not require complete survey, but merely subdivision of existing surveys. An area of 77,370 acres of Native land is in hand, the authorities having been already issued to various private surveyors. It should be mentioned under this head that the Native work returned by Mr. A. M. Roberts is a cadastral survey of small sections near Wanganui, for revision and amendment of titles, and is quite a different class of work to the Native Land Court work.

Roads.—There is nothing of importance under this heading, as, although all surveys of Crown lands necessitate great lengths of roads, these contribute to the total cost of settlement survey without appearing separately. Only 5½ miles of road were laid out separately from settlement work.

Other Work.—The main body of settlement survey is surrounded by a fringe of small surveys, reports, inspections, &c., undertaken usually in the winter recess, and which cannot be classified under the main headings. It includes, for instance, all the inspections which form the Inspecting Surveyor's principal occupation, also the cost of his duties as the principal office computer and examiner of plans.

Proposed Survey Operations.—One staff surveyor will, in two months' time, complete the roading of a Native block, and continue the subdivision of it for Native Land Court purposes; the remaining five surveyors will all be occupied with settlement surveys of the Crown lands they are engaged upon, totalling some 56,279 acres.

Office-work.—The staff has been somewhat short-handed during the year owing to illnesses and changes by transfer; the work, however, has been kept up very well. The "stock" works under these circumstances suffer first, sorely needed as many of them are, there are consequently fewer new maps made to replace disappearing records, only 5 having been done, with 30 block sheets. The output of district maps, however, has continued, and 9 of these have been sent for publication during the year. Of the 94 survey districts in this land district, however, only 27 have been drawn, and I look forward to the time when their completion will do away with much of the excessive hack tracing-work now necessary.

Examination of Plans.—There has been a general increase in the number of plans received for examination this year, the total under all heads being 591. Of these, 263 were received in the Land Transfer Branch, 236 in the General Computing Branch (being a record), and 92 in the Statutory Plans Branch. A total of 528 plans were approved, being 222 in the Land Transfer Branch, 218 in the General, and 88 in the Statutory Plans Branches. The new plans in the General Branch covered 26,000 acres in 106 sections, and 144,776 acres of Native land in 658 subdivisions.

Land Transfer Branch.—In addition to the above plans, this branch dealt with 77 applications, 1,686 transfers, 224 leases, 155 mortgages, 42 Orders in Council, 76 Proclamations, 135 Native Land Court orders, 372 balance certificates, 64 caveats, 100 other dealings, and 4,505 plans were put on titles. An unpleasant feature of the year's work of this branch has been the unduly great waste of time and delay in examination caused by the plan-work and field-work of some two or three surveyors holding licenses under the Act, which has become much too serious to be dealt with leniently.

Native Land Court Work.—This work has continued to increase, 169 authorities having been issued for 597 subdivisions, totalling 118,354 acres, at an estimated cost of £9,259, of which the sum of £6,773 14s. 2d. has been paid on completed surveys. The liens repaid the Department on account of these and prior surveys amounted to £2,267 7s. 9d., the payment of which enabled 159 Court orders to be indorsed. Plans to the number of 183 passed through the branch, showing 829 subdivisions, containing 146,689 acres; 433 applications for charging-orders were made, and 143 notices of release issued.

General Drafting-work.—The staff of this branch has been kept busy and very fully occupied, owing to the larger number of plans passing through the office. This latter circumstance, combined with a shortage of staff referred to previously, made it necessary to confine the work chiefly to actual routine and attention to the daily income and outgo, relaxing work on the preparation of new standard records, replacing outworn maps and records, &c. The volume of work is of a kind requiring much and careful checking in details, this most essential part of the work constituting the principal difficulty in maintaining the output at a high level of quality and quantity. The officer in charge, Mr. Caldwell, is deserving of special mention in this respect, he being responsible for these characteristics. 1,502 tracings were made, 176 plans were reduced and recorded, 30 new block sheets were laid down, 53 tracings were made for photo-lithography, and 5 plans were compiled. In addition to the above, the Statutory Plans Branch made 12 tracings, 8 plans, and 1 new road-record map, and recorded 43 dedications, and amended 2 statutory local-body district maps, besides a large quantity of minor additions to records and amendments of plans.

Miscellaneous.—The general classes of work have been accompanied, as is invariable, by a cloud of small searches, minor works, amendments of plans, registers, plans of deeds-orders, attendances on public, correspondence, and other matters.

Changes of Staff.—In the field Messrs. W. M. Gray and H. L. P. Dyett left the district staff, Mr. Gray under temporary transfer to Hawke's Bay and Mr. Dyett retiring from the Department to private practice; Mr. Olsen, unlicensed assistant, also being transferred to Hawke's Bay. Owing to the exigencies of settlement survey, Mr. H. E. Girdlestone returned to the staff from triangulation work, and has been engaged in the South Wairarapa. Two cadets, Messrs. L. W. B. Hall and N. A. Middlemas, left the office and entered the field in another district, and Cadet Mr. R. F. Burgess joined the district field staff from Canterbury. In the office one draughtsman has been absent a great part of the year owing to serious illness, and there have been several changes among the cadets and officers. Mr. R. F. W. Mackenzie passed his authorized surveyor's examination and took the field in the Auckland District.

General Remarks.—Since my appointment to this office on the 1st June last the field surveyors have been chiefly occupied in continuing the work begun by them in the previous season. Much preliminary work in exploring large blocks of Crown and Native land has been done, and it will be the end of next season before the full results of their operations will be apparent. They are now busy on the straightforward subdivision of the blocks, and henceforward their progress will be more apparent.

I have much pleasure in reporting that I have found all the officers of this branch of your Department most obliging and willing to push forward the work allotted to them, and in this connection I desire especially to acknowledge the capable and energetic assistance I have received ever since I came here from Mr. Maurice C. Smith, the Chief Draughtsman.

T. N. Brodrick,
Chief Surveyor

NELSON.

Triangulation.—The work under this heading completed during the year is 10,385 acres, of which 7,985 acres are on the north bank of the Motueka River and 2,400 acres in the Surrey Districts of Waitakere and Aorere.

Standard Survey.—The standard survey of the Township of Murchison, some 4½ miles, was completed during the year. The much-needed survey of the City of Nelson is in progress, and is well advanced. This is being carried out by Mr. C. A. Mountfort, acting under the control of the Head Office.

Topographical Survey for Selection.—Only a small area of 2,708 acres at the head of the Pokororo River was completed, at a cost of 1·35d. per acre.

Rural.—Under this head a total area of 60,365 acres, at an average cost of 2·68s. per acre, is returned, out of which the staff surveyors executed 33,626 acres, at an average cost of 2·66s.

per acre, while 26,739 acres were done by contract surveyors, at an average cost of 2·69s. per acre. Practically the whole of these areas were in heavy bush, and mostly on the west coast, where rough country and a wet climate obtain.

Town Selection Surveys.—This comprises the Winearls Settlement for workers' homes in Nelson, and the mining township of Hukawai, near Reefton, &c.

Native Land Court Surveys.—Contract surveyors did 7,578 acres, at a cost of 19·58d. per acre, but no area was surveyed by the staff surveyors.

Road Surveys.—A length of 28·15 miles was laid off, at a cost of £18·35 per mile.

Other Work.—By far the largest item—viz., £505 7s. 2d.—represents inspections, mostly of contract surveys on the west coast, and although this may seem a very large amount, the very unsatisfactory nature of the reports fully justified the expenditure.

Proposed Operations for 1913–14.—Next year the staff will be engaged on settlement surveys aggregating nearly 100,000 acres, and several large blocks of land should be opened for selection during the year—viz., the Howard Block, 20,000 acres; Waimea and Gowan Blocks, 10,000 acres each; Lamb Valley Block, 6,000 acres, &c. It is not anticipated that there will be much of any other class of survey.

Office-work.—The staff throughout the year has remained at the minimum strength, and it has only been possible to cope with absolutely necessary work in both the clerical and drafting branch.

Examination of Plans.—During the year 131 plans were examined and approved, in connection with which were 405 traverse sheets. Of these plans 79 were sectional surveys, 30 were road plans, and the remainder miscellaneous.

Land Transfer Branch.—In this branch 75 plans were approved, 176 applications and transfers were dealt with, and 221 certificates of title were made out in duplicate.

Native Land Court Surveys.—There is not much of this class of work in this district.

General Draughting Work.—During the year two draughtsmen, who were also surveyors, took the field, making the draughting staff so shorthanded that it has only been possible to keep up with difficulty the actually necessary current work.

Miscellaneous.—There was, of course, the usual volume of miscellaneous duties which cannot be tabulated, such as attendance on the public, correspondence, searches, &c.

Changes of Staff.—During the year Mr. P. R. Wilkinson, assistant surveyor, was transferred to Auckland, and Mr. S. Parkinson has taken his place here, and took the field in March.

In conclusion, I desire to thank all the officers, both field and office staff, for their active assistance and co-operation during the year.

F. A. Thompson,
Chief Surveyor.

MARLBOROUGH.

Triangulation.—With the exception of a little breaking-down work in connection with the Picton–Blenheim Railway survey, no work of this nature was carried out during the year.

Rural.—An area of 8,825 acres, in 23 sections, was completed under this head, practically the whole of which is situated in rough bush country, the cost of same being 2·21s. per acre, which, considering the nature of the country surveyed, must be taken as very satisfactory.

Town and Village Sections.—Very little work was done under these headings during the year.

Roads and Railways.—The principal work done during the year was the completion of the survey of the Picton–Blenheim Railway. This survey being in a very old-settled district, originally laid out by faulty magnetic traverses with comparatively few surveys of recent date in the vicinity, made it necessary to extend the verification work greatly beyond the limits first contemplated, and the work consequently has been more intricate and expensive than was originally anticipated. Mr. A. Hodgkinson, who carried out the survey, was, on completion of the field-work, temporarily transferred to the Auckland District, the plans of the railway survey being completed by the office staff. In conjunction with the above, some 8 miles of the Picton–Blenheim Road was surveyed by Mr. Hodgkinson. Except for an old magnetic traverse, made in the year 1864, this road, with numerous deviations, had never been properly surveyed. These two surveys will be of great value to surveyors, and can be used as a standard for future survey operations in the vicinity of the road and railway-line. Other work was mostly in the Sounds, and carried out by Mr. F. Stephenson Smith at schedule rates.

Native Land Court Surveys.—An area of 3,592 acres, covering 24 subdivisions, was surveyed during the year by private surveyors working on schedule rates.

Other Work.—The expenditure under this head is mainly in connection with revision surveys of old magnetic work in the Waitohi Valley.

Inspections.—Three field-inspections of surveyors' work were made during the year, the results of which on the whole indicate generally satisfactory work.

Standard.—The previous standard for testing surveyors' tapes being in a very unsatisfactory position, permission was obtained from the Railway Department to lay down a 5-chain standard adjoining the Blenheim Railway-station. This has now been done, and I expect to have the final marking completed in the next few weeks.

Proposed Operations, 1913–14.—The settlement work for the coming year will be mainly in the Opouri Valley. A large portion of the milling-timber having been cut out, there will probably be an area of from 4,000 acres to 5,000 acres requiring subdivision. In the Sounds there is an area of about 1,300 acres that has been applied for; also a number of spotting surveys in various parts of the district.

[*H. E. Girdlestone, photo.*

General View of the Spur leading up to Te Heu Heu Peak, the Route following from Waihohonu Hut.

[*H. E. Girdlestone, photo.*

Rocks and Snow Slopes on the Summit of Mount Ruapehu.

[*H. E. Girdlestone, photo.*

Wind-screen erected to keep Sun and Wind off the Instrument-station, Mount Dundas. Height, 4,944 Feet The Highest Trig. Station on the Tararuas.

[*H. E. Girdlestone, photo.*

Peculiar Ice Formation in the Crater of Mount Egmont in the Middle of Summer.

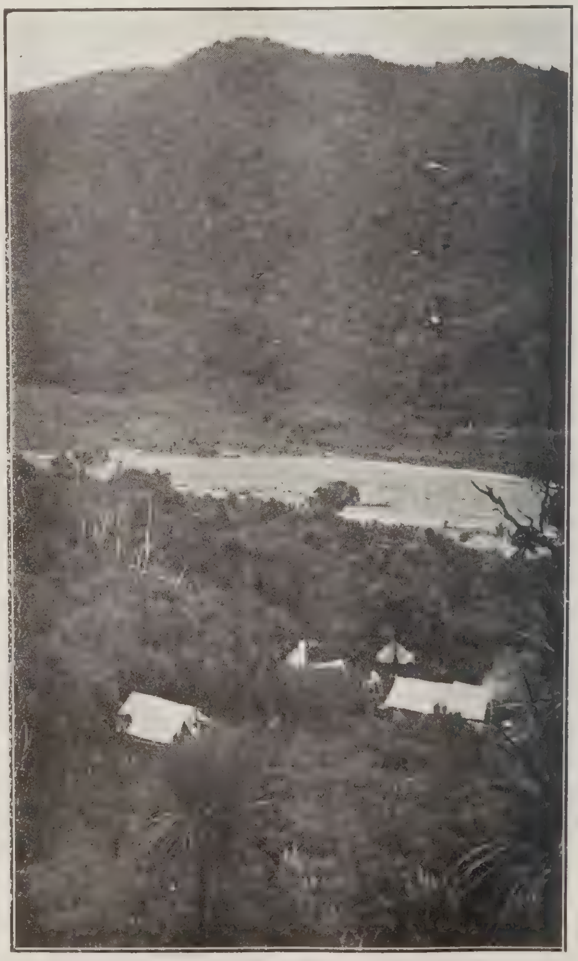
To face p. 16.]

[H. E. Girdlestone, photo.

THE FIRST START.—PIONEER SETTLERS IN THE RUATITI BLOCK, WAIMARINO.

[H. E. Girdlestone, photo.

ASCENDING THE VOLCANO AT NGAURUHOE. THE ACTIVE CRATER HAS JUST SENT UP A VOLUME OF SMOKE.



[H. E. Girdlestone, photo.

SURVEY CAMP ON THE BANKS OF THE TURANGANUI RIVER, WAIRARAPA DISTRICT.

In the absence of our staff surveyors, who were, at the end of last September, temporarily transferred to other districts, Mr. F. Stephenson Smith has made several surveys for the Department, and has in hand at present about 600 acres in various districts.

Office-work: Examination of Plans, &c.—The total number of plans received in the ordinary Survey Branch was 63, with 85 traverse sheets, comprising 11 departmental plans with an area of 8,850 acres in 24 sections; 6 Native Land Court plans with 24 sections, and an area of 3,592 acres; 20 plans in triplicate (60 copies), covering 18 miles of the Picton–Blenheim Railway; 16 plans of 19 miles of road; 7 compiled plans, and 5 plans for Governor's approval. 349 tracings were prepared, 186 diagrams placed on Crown leases, &c., and 7 tracings made for photo-lithography.

Land Transfer.—In this branch 34 plans and 68 traverse sheets were received, covering an area of 17,256 acres, with 85 subdivisions; 442 diagrams were placed on certificates of title.

Changes of Staff.—The only changes made in the personnel of the staff was the resignation of Mr. H. P. Fougère, clerical cadet, his place being taken by Mr. C. E. Mountfort; and the transfer of Miss C. M. Watterson, who had been ten years in this office, to New Plymouth, Miss W. E. C. White, of that office, taking her place. Messrs. A. Hodgkinson and L. Hunt, the only staff surveyors in the district, were temporarily transferred for urgent work, the former to Auckland and the latter to Canterbury.

In conclusion, I beg to thank the staff for their active co-operation and assistance in the year's work.

W. H. Skinner,
Chiet Surveyor.

WESTLAND.

Triangulation.—The total work under this heading comprises 1,500 acres by District Surveyor A. N. Harrop, at a cost of 15·4d. per acre.

Standard Survey.—A survey has been made under this heading of a portion of the Town of Cobden by District Surveyor A. N. Harrop.

Topographical Surveys.—Messrs Morison and Cunningham completed 2,400 acres under this heading at an average cost of 4·8d. per acre.

Gold-mining Surveys.—No work has been done by the staff under this heading.

Rural Surveys.—The total area surveyed under this heading for the year amounts to 9,622 acres, in 64 sections, at an average cost of 3·56s. per acre. Much of this has been isolated spotting surveys, nearly all in rough bush country and entailing a great deal of travelling.

Village and Suburban.—Under this heading Messrs. Morison and Cunningham have surveyed 125 acres, in 16 sections.

Town Surveys.—District Surveyor Harrop returns 23 sections under this heading, at an average cost of 30·0s. per section.

Roads.—Only 1 mile is returned under this heading, at a cost of £11.

Other Work.—This work chiefly consists of adjustments of scenic reserves and settlers' boundaries, inspections, defining boundaries of timber-areas, and clearing and repairing old trig. stations. I might here note that two of the field staff were absent in Canterbury three months, and another absent for nine months on extended leave.

Inspection Surveys.—District Surveyor W. Wilson has inspected the work of each surveyor, both staff and private, in this district, and the inspections generally disclose very satisfactory results. Unfortunately I have been unable to carry out my intention to make a personal inspection of every party, on account of pressure of work.

Office-work.—During the year the draughting staff has been occupied almost wholly with current work. The several resignations and changes having left the office again very short-handed, it has been impossible to work off many arrears. Ninety-three plans were received and examined, classified as follows: 26 Land Transfer, 19 statutory, 8 mining, and 40 relating to land-settlement. 732 copies of plans were placed on the deeds—namely, on Crown leases 508, and Land Transfer titles 224. Two 40-chain plans were compiled, and 28 tracings for photo-lithography were prepared, representing 157,000 acres of land for selection, 150,800 acres being pastoral runs and 6,200 acres of land for settlement. A litho was also prepared of Cobden Township and one of Waiwhero Survey District. 241 survey data tracings have been prepared for the field staff, and 497 miscellaneous tracings and numerous coloured lithos have been made. Plans have been compared with the office records for the District Land Registrar and others. The readjustment of the whole of the timber records has been completed, and the timber maps are now up to date. Various tracings and descriptions have been prepared for *Gazette* notices. Returns and plans have been forwarded giving the area of available land in Westland—revised area of the whole of Westland, and information for the Forestry Commission. The routine work of recording, cross-indexing, &c., is up to date, and many of the old plans have been repaired and remounted.

Proposed Operations, 1913–14.—There is on hand 14,774 acres of application surveys scattered all over Westland, which, having all my field hands at work again, I hope to see mostly finished during the coming season, besides current work in the shape of new applications. Further, I intend to have surveys of from 10,000 to 12,000 acres of lands for settlement made and offered if the disabilities under which we labour with regard to mining grants, &c., can be removed.

Changes of Staff.—During the year Mr. A. D. Macfarlane, Receiver of Land Revenue, was transferred to Invercargill, after an efficient service of twenty-three years on the local staff. Mr. H. G. Bateman, draughtsman and computer, resigned from the service to take up mission work in China. Mr. J. R. Clements, draughtsman, was transferred to the Wellington District Office. Mr. J. Fitzsimmons was appointed draughting cadet, and Mr. R. E. E. McLeod clerical cadet. Mr. S. Emmett resigned from the service.

In conclusion, I beg to thank the officers of both the field and office staff for their hearty co-operation and assistance in the work of the Department.

H. D. M. Haszard,
Chief Surveyor.

CANTERBURY.

Rural.—Under this heading 77,339 acres are returned as completed, which comprise the following settlements: Sherwood Downs, Four Peaks, Bourndale, Avenel and Timaunga Extensions, Claremont, Waimate, Aylesbury, Strathmore, and part of Ashwick; also Mount Peel Exchange and Hanmer Plantation Extension and Exchange.

Topographical.—34,180 acres are returned under this heading, being portion of Sherwood Downs.

Roads.—The 4 miles returned under this heading form the road surveyed by Mr. C. H. Morison at Oxford.

Town and Gold-mining Surveys.—I have nothing to report under this heading.

Land Transfer.—In this branch 396 plans were examined and approved, 2,720 deeds and other instruments passed, and 4,495 certificates of titles were indorsed.

Other Work.—This comprises miscellaneous surveys.

Survey Inspections.—During the year 11 field inspections have been made, and in most cases the work has proved to be satisfactory.

Proposed Operations for the Year 1913–14.—This work will comprise the subdivision of Runs 145 and 145A (30,300 acres) in the Ashley and Oxford Survey Districts, the completion of inspection of roads and bridges in the Ashley, Oxford, Waikari, and Kowai Survey Districts, the survey of the road to give access to Crown lands in the Lees Valley, the survey of the Rangitata River Conservation Reserves (2,900 acres), the extension of the standard survey in the suburbs of Christchurch and Kaiapoi, the survey of any estates that may be acquired, as well as a number of miscellaneous surveys. There are also the surveys of Ashwick and Mount Nessing Settlements, Crown lands in the Oxford Survey District, and Greta Peak Runs, comprising 74,385 acres, which, though finished in the field, await the completion of plans.

Office-work.—The office staff has had a busy year preparing all the necessary data for the survey and notification of the respective settlements. Twenty-nine Public Works plans, 32 road-deviation plans, 28 land-for-settlement plans, and 7 other plans have been examined and approved, besides the usual tracing and descriptions. The tracings of Amuri County are in hand.

Transfers and Resignations.—Mr. T. N. Brodrick, Chief Surveyor and Commissioner of Crown Lands, was transferred to Wellington in June, and I succeeded him. Mr. A. G. Allom, District Surveyor, resigned in October last. Messrs. C. H. Morison and A. N. Harrop, District Surveyors, who were here temporarily, returned to Westland in June. Messrs. R. R. Richmond and Leslie Hunt were transferred here in October and November respectively, the former permanently and the latter temporarily, to assist at settlement and other surveys. Mr. G. A. Hathaway, unlicensed assistant, has also been assisting. Mr. E. Taylor, draughtsman, was transferred to Napier.

In conclusion, I beg to thank the staff for their co-operation and assistance.

C. R. Pollen,
Chief Surveyor.

OTAGO.

Minor Triangulation.—No work has been done under this heading, but as mentioned in previous reports, there are several districts that should be revised when opportunity offers.

Rural and Suburban.—Two staff surveyors, Mr. D. I. Barron and Mr. S. T. Burton, have been engaged on this class of work, the first up to November, 1912, when he was transferred to the Auckland District, and the latter continuously for the past year. The services of Mr. N. Paterson, contract surveyor, were obtained in connection with the subdivision of the Otanomomo Settlement, recently acquired for selection. The total area returned for the year is 11,948 acres, particularized as follows: 8,350 acres surveyed and subdivided into 4 small grazing-runs; 1,818 acres divided into 23 allotments and forming the Otanomomo Settlement; 1,780 acres divided into 59 sections, and consisting of scenic reserves in heavy bush land, and ordinary application and settlement surveys very scattered and extending from Lake Hawea down to Roxburgh. The average cost per acre was 1·92s.

Standard Survey.—Mr. W. T. Neill, Inspecting Surveyor, continues to make good progress with the standard survey of the City of Dunedin, but has to report that the weather for the past year has been very unfavourable for his operations. Twenty-eight miles of streets were traversed and marked, and the work of offsetting for the final determination by the City Council of the permanent alignments will shortly be commenced.

Town Surveys.—Fifteen plans of new townships were examined and approved under the Land Act, 1908, and the Land Laws Amendment Act, 1912.

Mining Surveys.—Twenty-four mining surveys, comprising 1,798 acres, in 38 claims, were examined and approved. Three of these, in 4 claims comprising 206 acres, were made by our staff, at a cost of 4·04s. per acre, and the remaining twenty-one, in 34 claims comprising 1,592 acres, by private surveyors on the fee system or by private arrangements.

Roads and Railways.—Twenty-nine surveys and plans were examined and approved, all but two being the work of private surveyors.

Land Transfer.—One hundred and six plans, representing 9,740 acres, were examined and approved, and I have again to express satisfaction with the excellence of this class of work.

Proposed Operations for the Year.—Under the direction of Mr. W. T. Neill, Inspecting Surveyor, the standard survey of the City of Dunedin will still be the particular work for the coming year. Since the commencement of the standardizing, the extent of the City of Dunedin has been very largely increased by the inclusion of the adjacent Boroughs of Roslyn and North-east Valley, and as it is almost certain that this additional area will be brought into the original scheme, there is every prospect that Mr. Neill's services will be necessary in this class of work for the next eighteen months or two years. Assistant Surveyor S. T. Burton has in hand 289 acres in the Teviot Survey District. Two pastoral runs, containing about 183,000 acres, mature in the year 1915, and it is probable that a subdivision into smaller areas for lease under similar or small-grazing-run systems will take place, necessitating the offering of the lands in February of 1914. Two estates in North Otago, aggregating 1,421 acres, have been purchased under the Land for Settlements Act. These will be subdivided, and it is hoped to offer them for selection in July of this year.

Office-work.—The following plans were examined and approved: 106 Land Transfer, 29 roads and railways plans, 24 mining surveys, 79 staff plans, being a total of 238. Thirty-five photo-lithographic tracings were made for sale posters, and maps for photo-lithography of Catlin, Teviot, Tarras, and Leaning Rock Districts were prepared for reduction and printing on the 80-chain scale. Twenty-four small plans of private subdivisions were drawn and lithographed here for the purpose of bringing the City of Dunedin and Suburbs maps up to date, and also the 4-mile map of Otago District. Twelve new plans were made for Land Office, and the Railway land plans affecting Conical Hills Settlement were compiled and drawn. Descriptions of all education reserves in Otago were revised, and all survey matter affecting Southland was collected and passed on to that district.

Diagrams were placed on 112 leases in duplicate and on 152 in triplicate; a total of 680 copies and 831 miscellaneous tracings for various purposes were prepared. In the Land Transfer branch diagrams were placed on 898 certificates in duplicate; a total of 1,796 copies and 1,150 deeds were examined. The preparaton of the City of Dunedin standard maps is being steadily advanced, and to preserve symmetry is being wholly undertaken by one draughtsman. In the lithograph department, 2,236 lithos were printed, 1,148 maps mounted, and 30 books bound or rebound.

I am pleased to be able to record my appreciation of the efficient manner in which the officers have carried out their duties, and of the improvement in draughtsmanship noticeable in the younger officers.

E. H. WILMOT,
Chief Surveyor.

SOUTHLAND.

Minor Triangulation.—No work of this nature has been done during the past year.

Rural.—A total area of 30,402 acres, in 173 sections, is returned under this heading. Of this total 26,736 acres was surveyed by the staff surveyors, at a cost of 3·62s. per acre, and includes about 15,000 acres situated in rough bush country necessitating a considerable amount of road-grading and exploration, and, being mostly worked-out sawmill areas, entailed unusually heavy line-cutting, as well as an area of 3,587 acres of undulating and hilly open land with patches of bush (Maori Hill Estate). Contract surveyors executed an area of 1,461 acres, at a cost of 1·27s. per acre, while the balance of 2,205 acres is sawmill areas by licensed surveyors, which were paid for by aplicants.

Village and Suburban.—Under this heading are shown 51·29 acres, in 28 sections, surveyed, at a cost of 32·67s. per acre, by Mr. H. M. Thompson in Alton District, and by Mr. N. L. Falkiner at Waikawa Village.

Town Section Surveys.—These comprise 19·34 acres, in 52 sections, surveyed, at a cost of 27·18s. per acre, by Mr. N. L. Falkiner in Invercargill City, Town of Gore, and Seaward Bush Township.

Native Land Court Surveys.—A subdivision of 11·7 acres into 45 sections of about a quarter-acre each, in the Aparima Native Reserve, Jacob River Hundred, adjoining Riverton, was made by Mr. H. R. Dundas, licensed surveyor.

Gold-mining Surveys.—One special claim, containing 68 acres, and surveyed by Messrs. Blaikie and Wilson, in the Hokonui Survey District, and paid for by applicant, appears under this head.

Roads and Water-races.—17·47 miles of roads to give access to Crown lands were surveyed by the staff surveyors during the year, at a cost of £21·42 per mile.

Other Work.—The amount shown under this heading includes inspection surveys, revision and street-alignment surveys, survey of 2,280 acres scenic reserves in Kingston District, exploration survey and trial grading of roads in connection with a large block of land in Mokoreta

District which proved too rough and inaccessible to warrant subdivision for settlement; inspection, supervision, and passing of Waikawa Jetty contract; reports and engineering surveys in conection with East Taieri drainage scheme; exploration and report on route from Wakatipu to Milford; miscellaneous small surveys and reports; re-establishing and repairing trig.-stations, &c.

Explorations.—Towards the end of December and the beginning of January last Mr. D. Macpherson, by permission, accompanied Mr. Grave, of Oamaru, and others in a very interesting trip over a new route from Wakatipu to Milford which had been located some two years ago by Mr. Grave and party. His full report on this, together with a sketch-map showing the route followed, was forwarded to you on the 4th March last.

Inspections.—Two Land Transfer subdivision surveys in Toetoes and Eyre Districts, comprising some 45,000 acres, were inspected by Mr. C. Otway, District Surveyor, during the year.

Traverse Closures.—Twenty-eight circuits, totalling 115 miles, returned by the staff, show an average closing-error of 0·29 link on the meridian and 0·31 link on the perpendicular per mile.

Proposed Operations.—Mr. C. Otway has just commenced the subdivision of 1,250 acres in Chatton District, which will probably finish in May. He will then proceed to Lillburn District and commence the subdivision of some 3,400 acres in Motu Bush. Mr. D. Macpherson has in hand some 3,500 acres in Alton and Aparima Districts, which he expects to finish about the end of December next. He will then undertake the subdivision of further areas in the same districts, provided they are released from sawmilling operations. Mr. N. L. Falkiner is now engaged on the subdivision of about 760 acres in the Hokonui District. When this is completed he will survey some small sections at Ocean Beach, Campbelltown Hundred, and afterwards proceed to cut up about 2,000 acres in Jacob River Hundred, together with any further area that may be found suitable in that locality. Mr. H. M. Thompson is at present subdividing about 2,000 acres in the Longwood Survey District, and when this is completed he will proceed to Lillburn District to explore some large blocks of Crown land there, with a view of having any suitable portions cut up for settlement.

General.—The unusually wet seasons during the past two years have been very unfavourable for field operations generally, but I am pleased to say that in spite of this the staff have returned a very satisfactory amount of work.

Office-work.—During the year the new lithographic map of Invercargill City referred to in my last annual report has been completed, and since its publication has been much in demand; six lithographic maps of survey districts have been thoroughly revised and brought up to date; the preparation of lithographs of the interior districts has been put in hand, one map containing four districts being almost completed. New Land Transfer record maps of the Town of Gore have been compiled, and several old maps brought up to date, but much remains to be done in compiling these records whenever opportunity offers. Eighty-six ordinary survey plans, representing an area of 19,327 acres, and 11 statutory plans, have been examined and passed; 17 lithographic tracings for sale plans, 389 miscellaneous tracings, and 455 working tracings were made; 144 Land Transfer plans were traced and maps of ridings revised for Valuation Department; 20 local bodies' schedules were prepared in duplicate, and 853 maps of various descriptions mounted. Two returns for Parliament were prepared, one in connection with the timber industry and one of Crown lands; also a return in triplicate for the Royal Forestry Commissioners. The work of compiling two large county index-maps has been gone on with whenever possible, and I am pleased to say that one is nearly completed. The time, however, of the draughting staff has been almost entirely taken up in coping with the current work and the renewing of old index, application, and other maps, so that the index work, though much needed, has had to be placed aside for a time.

Land Transfer.—141 plans, representing 20,339 acres, were examined and passed; 41 Proclamations, &c., coloured off on titles singly and 13 in duplicate; 1,350 diagrams placed on certificates of title; and 950 deeds and other instruments examined and passed. A considerable part of one draughtsman's time has been occupied in assisting the Land Transfer Draughtsman with this work.

Changes of Staff.—During the year there have been considerable changes in the staff. Mr. C. Robinson was transferred to Christchurch, and Mr. R. S. Galbraith succeeded him here as Chief Draughtsman. Mr. G. W. Palmer, Receiver of Land Revenue, was promoted to Christchurch, and Mr. A. D. McFarlane transferred from Westland to take his place. Mr. E. S. Wood, draughtsman, was transferred here from Head Office. Mr. E. D. Thompson, cadet in the Receiver's office, has been promoted to the Head Office; and three cadets, Messrs. G. A. Harvey, F. W. E. Mitchell, and T. H. Reid, have been appointed to the Lands Branch of this office.

In conclusion, I desire to record my appreciation of the efficient manner in which all the officers of both field and office staff have discharged their respective duties, and of their loyal co-operation and assistance during the past year.

G. H. M. McClure,
Chief Surveyor.

[*R. Leckie, photo.*

HAYLOCK'S LANDING, MARAKOPA RIVER.

[*H. E. Girdlestone, photo.*

SURVEY PARTY SWAGGING UP THE OHAU STREAM EN ROUTE TO MOUNT DUNDAS.

To face p. 20.]

[*H. E. Girdlestone, photo.*

Kapakapanui Trig. Signal. Still in Good Repair. Built by the late James Mitchell, District Surveyor, in 1873.

[*H. E. Girdlestone, photo.*

Bivouac Tent at Kapakapanui Trig. after a Snowstorm.

[*H. E. Girdlestone, photo.*

The Crater-lake, Summit of Mount Ruapehu.

APPENDIX II.

REPORT ON DRAUGHTING-WORK AT HEAD OFFICE, WELLINGTON.

[By H. T. McCardell, Chief Draughtsman.]

The routine work of the office has been carried on very satisfactorily throughout the year.

The following plans were drawn for photo-lithography: Pahiatua County; Sheet 5, Auckland Provincial District, is being redrawn. The maps of Wanganui, Wanganui East, and Wellington are approaching completion, and should be published in the forthcoming year. A thermograph sheet was drawn for the Magnetic Observatory, Christchurch, and was printed in two colours. Plans of the base-lines at Matamata and Waitemata were prepared for the annual report, as was also a plan of the Warawara State Forest. A compilation of New Plymouth Borough is also in hand and very nearly completed.

Nineteen schedules for the Local Bills Committee of the House of Representatives were examined and certified to.

Fourteen new county maps were prepared and tenure coloured, also nine boroughs and four road districts.

Three hundred and sixty-four tracings were made, and no less than 1,001 plans were mounted. These comprise sale plans, county maps, tracings, townships, &c. This work absorbs nearly the whole of one officer's time throughout the year.

Among other duties performed by draughtsmen, there were 163 descriptions made; measuring-bands tested—two 10-chain, two 5-chain, and three 1-chain; seventeen licenses and seventeen certificates of competency, in duplicate, under the Surveyors' Institute and Board of Examiners Act, 1908, were prepared, and eighteen licenses in duplicate were prepared under the Land Transfer Act, 1908. Twenty-eight plans were drawn on deeds.

During the year 266 towns (Government and private) were examined, reported on, and when complying with the Act and regulations were recommended to His Excellency the Governor for approval under section 3 of the Land Laws Amendment Act, 1912. The distribution of these towns in land districts was as follows: Auckland, 176; Hawke's Bay, 23; Taranaki, 1; Wellington, 13; Nelson, 2; Marlborough, 2; Westland, 1; Canterbury, 22; Otago, 13; Southland, 13.

Thirty-eight plans were drawn on deeds. Twelve acclimatization districts for the Department of Internal Affairs, and ten registration districts were also compiled for the Registrar-General.

During the year I was absent on sick-leave for three months, and Mr. Farquhar fulfilled the duties. I have to thank all the officers for the assistance given me during the year.

APPENDIX III.—NEW SECONDARY TRIANGULATION.

[By C. E. Adams, M.Sc., F.R.A.S., Chief Computer.]

Active steps were taken, beginning in 1901, to revise some of the minor triangulation of the North Island, which has been of such immense value in the past in controlling settlement and all other surveys in the Dominion. Quite apart from the increasing value of land, it became necessary to keep somewhat in line with other countries, both inside and outside of our own Empire, and adopt more precise methods for our governing triangulation. To this end a start was made in observing the angles of the secondary triangles which had been schemed out to cover and tie in the minor triangulation in the Wellington and Taranaki Districts. The triangulation under revision is shown on the map attached to this report, and extends from the south of the Wellington District into the Taranaki District. The angles have been observed by Mr. H. J. Lowe and Mr. H. E. Girdlestone. The instrument used was a 10 in. Everest theodolite reading by three verniers to 10 seconds. Earlier observations by Mr. H. M. Skeet in the Taranaki District have also been used. These observations were made with a 10 in. Everest theodolite reading by verniers to 10 seconds. The triangulation emanates from the Wairarapa base and closes on the Okaiawa base. These are two of the bases that have been measured with high accuracy by Mr. J. Langmuir, Inspector of Surveys. Full particulars of the measurements of these bases are given in the Survey Reports for 1909–10 and following years. The provisional lengths await comparison of the measuring-bands with the 10-link standard bar. The approximate lengths and brief particulars of the bases are as under :—

Wairarapa base : Length, 64776·667 links = 8·1 miles ; probable error, ± 0·0219, or 1 in 2,962,000 ; date measured, 25th March to 29th May, 1909 = 47 days = 5·2 days per mile.

Eltham–Okaiawa base : Length, 79605·123 links = 10·0 miles ; probable error, ± 0·0128, or 1 in 5,142,000 ; date measured, 5th April to 24th June, 1910 = 46 days = 4·6 days per mile.

Waitemata base : Length, 41790·776 links = 5·2 miles ; probable error, ± 0·0077, or 1 in 5,424,000 ; date measured, 27th June to 29th August, 1911 = 21 days = 4·0 days per mile.

Matamata base : Length, 54799·707 links = 6·8 miles ; probable error, ± 0·01005, or 1 in 5,452,000 ; date measured, 2nd December, 1910, to 29th January, 1911 = 22 days = 3·2 days per mile.

Kaingaroa base : Length, about 11·5 miles. This has been completed on the ground, but the final results are not yet available.

These bases are shown on the map. The map also gives the proposed triangulation in the Auckland District, which it is intended to revise at an early date.

A provisional least-square calculation has been made through the sixty-one triangles connecting the Wairarapa and Okaiawa bases, using the provisional length of the Wairarapa base as the starting side and closing on the Okaiawa base.

In the report for 1911–12, page 27, an extract from the field-book and an abstract of the horizontal angles at a geodetic station were given. It is only necessary to add to that description that Chauvenet's criterion for the rejection of doubtful observations has been applied to all the observations given in the abstracts of the horizontal angles, with the result that out of a total of 1,118 separate observations only twenty-seven had to be rejected. In the adjustment there was one double quadrilateral containing ten triangles, and twelve polygons containing fifty-one triangles : the average error per triangle is 3·13″, and the probable error of an observed angle, as given by the expression $0{\cdot}6745\sqrt{\frac{\Sigma\Delta^2}{3N}}$ is 1·52″, while $m = \sqrt{\frac{\Sigma\Delta^2}{3N}} = 2{\cdot}25''$. The observations extend from 1896 to 1912.

The total area covered by the triangulation was 3,723 square miles, and the number of trig. stations was forty-four, and the average number of square miles per trig. station was 85. The lengths of the sides varied from 3 miles to 24, the average length being 12 miles. The distance between the bases is about 154 miles, and the calculated length of the Okaiawa base was 79602·40 links, while the measured length was 79605·123 links, giving a difference of 2·723 = 0·02 links per mile = 0·14 in. per mile.

It is proposed to have the triangulation revised where the error exceeds 6″ per triangle. This will involve the reobservation of eight triangles, and when this is done it is expected that the accordance between the calculated and measured lengths will be closer. As the average length of side is comparatively short and the observations are made in daylight, part at least of the triangle error is very probably due to phase, and in future observations steps will be taken to reduce the error from this cause as much as possible by specially designed signals and possibly by night observations.

The method of night observations should be given a systematic trial, as very frequently the conditions then are much more favourable than in the daytime. Experience elsewhere has shown that the method is not only more accurate than daylight observations, but it is also more economical, as the time occupied at any trig. station is materially reduced.

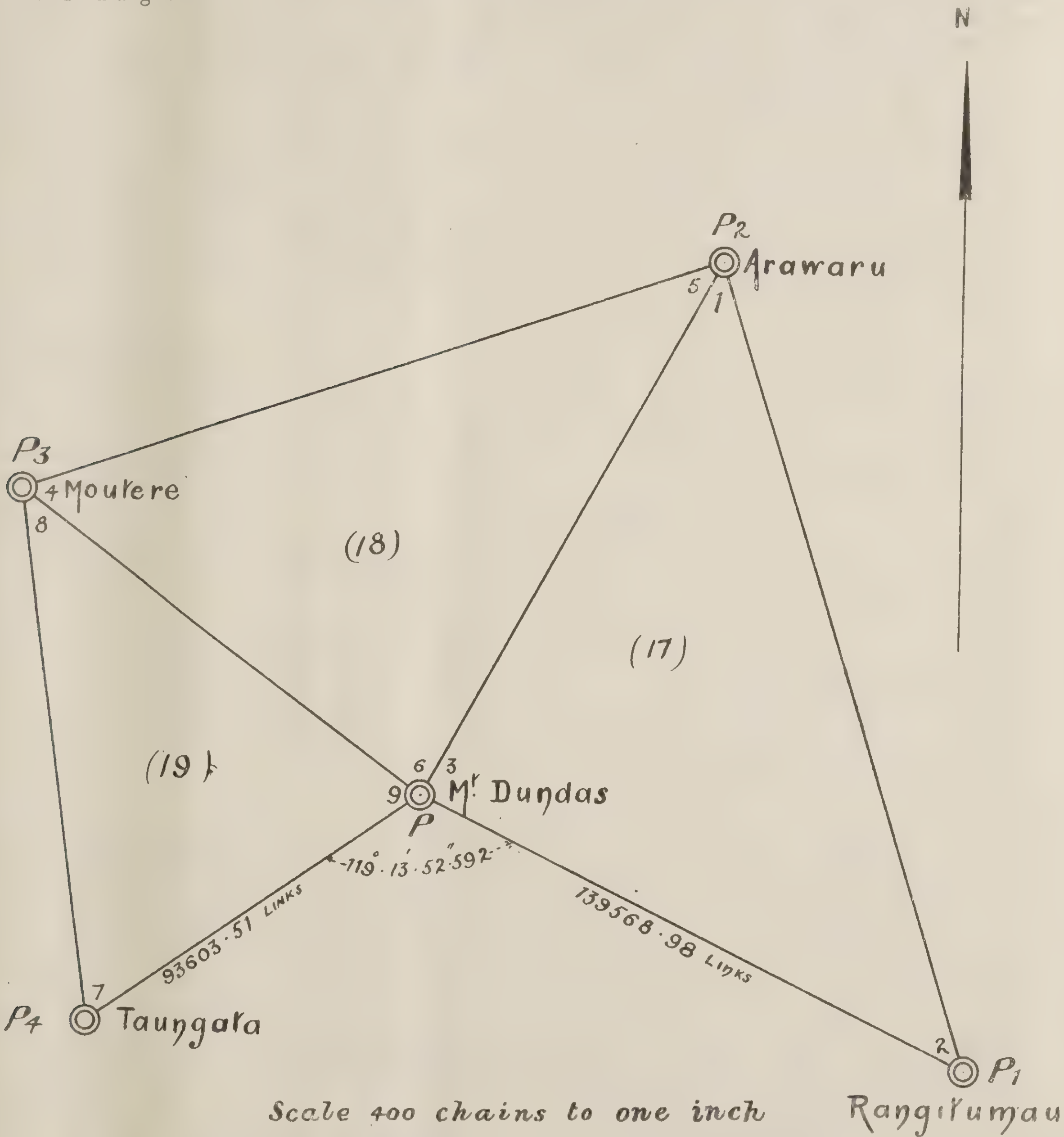
A modern theodolite of the design of the Repsold theodolite used in South Africa and now in use in Australia would certainly be of advantage for our higher-class work. The essential features are that the pivots are made of hardened steel, a watch-telescope is provided to check any slip or other movement of the instrument, and acts in the same way for a check on the horizontal circle as the bubble attached to the micrometers of the vertical circle does for the vertical circle. The conference of Surveyors-General held in Melbourne last year was most emphatic in its opinion that New Zealand's class of instruments was not consistent with the high character of our base-lines.

Observations for azimuth are required at each base and at a number of intermediate stations. In order to eliminate as much as possible the effects of deflection of the plumb-line the fundamental azimuths on which the triangulation is to rest should be observed at all the trig. stations of a polygon at both bases.

Similar remarks apply to the observations for latitude. Former observations at Taranaki, Wellington, Nelson, and Marlborough have disclosed a number of discrepancies which point to large deflections of the plumb-line, and further observations are required to ascertain the extent of the deflections.

During the year Mr. H. E. Girdlestone has observed at the following geodetic stations: Ranganui, Pipipi, Maitaimoana, Tauakira, Aramaire, Tuku, Waverley, Kotawhiwhi, Omaranui, Momemome, Ikitara, and Mount Mitchell. Mr. E. J. Williams has assisted at the computations in a satisfactory manner, and now has a good working knowledge of the least-square adjustments of the triangulation.

An example is given here showing the adjustment of a polygon by the method of least squares. In the figure the sides PP_1, PP_4, and the included angle at P are to be adopted as correct both in angle and distance. The observed angles are first tabulated in order (for method of observing see "Report on the Survey Operations" for the year 1911–12), with number of complete sets of observations, and observers initial given opposite each angle. The "spherical excess" (ϵ_1) is then calculated as follows: ϵ_1 = double area in square chains × E : E being a geodetic latitude factor based on Clarke's 1880 Spheroid, and given in Tables of Geodetic Factors, Trans. A.A.A.S., 1904, p. 93. The summation error of each triangle is then found and distributed in the proportion of one-third to each observed angle.



The next schedule shows the application of the adjustment. Column (1) contains the number of angle, (2) the observed angles corrected for one-third triangle error, (3) the centre spherical angles. (4) the correction to (2) for spherical excess, (5) the angles of the first computation, equal to (2) + (4) (10) and (11) contain the sines and value of 1″ of (5), and with these sines the three triangles are solved.

and the length of PP_4 obtained by calculation from PP_1. Comparison of this value with the true value gives ϵ, while ϵ_0 is obtained from (3). Column (8) contains the cotangents of (5), (9) gives a_1 b_1, c_1, &c., and $\Sigma\ (a^2 + b^2 + c^2)$; from this column $h = c_1 + c_2 + c_3$ and $2k = \frac{1}{3}\ \Sigma\ (a^2 + b^2 + c^2)$ are obtained.

The equations for P and Q are now formed and solved. With these values of P and Q the corrections to the observed angles are calculated, and the values entered in column (6) and applied to the angles in (5), giving the final plane angles as shown in (7).

At this stage the work is checked by calculating PP_4 from PP_1, using the sines of the final plane angles in (7), and, as shown on the schedule, the calculated value of PP_4 agrees with the true value, thus proving the correctness of the work.

The triangles are solved using the sines in (13) and the results given in (15). The cotangents of (5) in (8) are taken from "Tafeln für Maschinenrechnen," by Dr. F. G. Gauss, published at Halle, A.S., by Von Eugen Strien, and checked by Chambers's tables. The natural sines of (5) in (11) are taken from tables of "Natural Sines and Cosines," by C. L. H. Max Jurisch, published at Cape Town, S.A., by Herrman Michaelis, and checked by Chambers's tables, the value of 1″ being entered in (10). The natural sines of (7) in (13) are again taken from tables by C. L. H. Max Jurisch, the first and second of each triangle being checked by adding algebraically (12), the third being checked by Chambers's tables. The work being thus checked at every point reduces the risk of numerical slips to a minimum.

In solving the triangles the usual practice is to start from the longest base-line and divide that length by the sine of the opposite angle, entering the value obtained underneath the three sines of each triangle in (13). This value is in turn multiplied by the sines opposite the required sides and the results entered in column (15), and so on for each triangle.

The notation used as follows:—

Let l^1 = length of PP_4, calculated from PP_1, using the angles from column (5);
let l = true length of PP_4:
then $\epsilon = \dfrac{l - l^1}{l}$ radians,
ϵ_0 = sum of angles at P (from (3)) − 360°,
α_1 = cot angle 1, column (5),
β_1 = cot angle 2, column (5),
$a_1 = 2\ \alpha_1 + \beta_1$,
$b_1 = -\alpha_1 - 2\ \beta_1$,
$c_1 = -\ \alpha_1 + \beta_1$,
$2k = \frac{1}{3}\ \Sigma\ (a^2 + b^2 + c^2)$,
$h = c_1 + c_2 + c_3$,
i = the number of triangles.

The equations for P and Q are—

$$h\ P + 2i\ Q + \epsilon_0 = 0$$
$$2k\ P + h\ Q + \epsilon\ = 0$$

The corrections to the angles are—

Angle 1 = $a_1\ P - Q$
Angle 2 = $b_1\ P - Q$
Angle 3 = $c_1\ P + 2Q$, &c.

The final plane angles are therefore equal to column (5) + column (6).

Observed Angles.

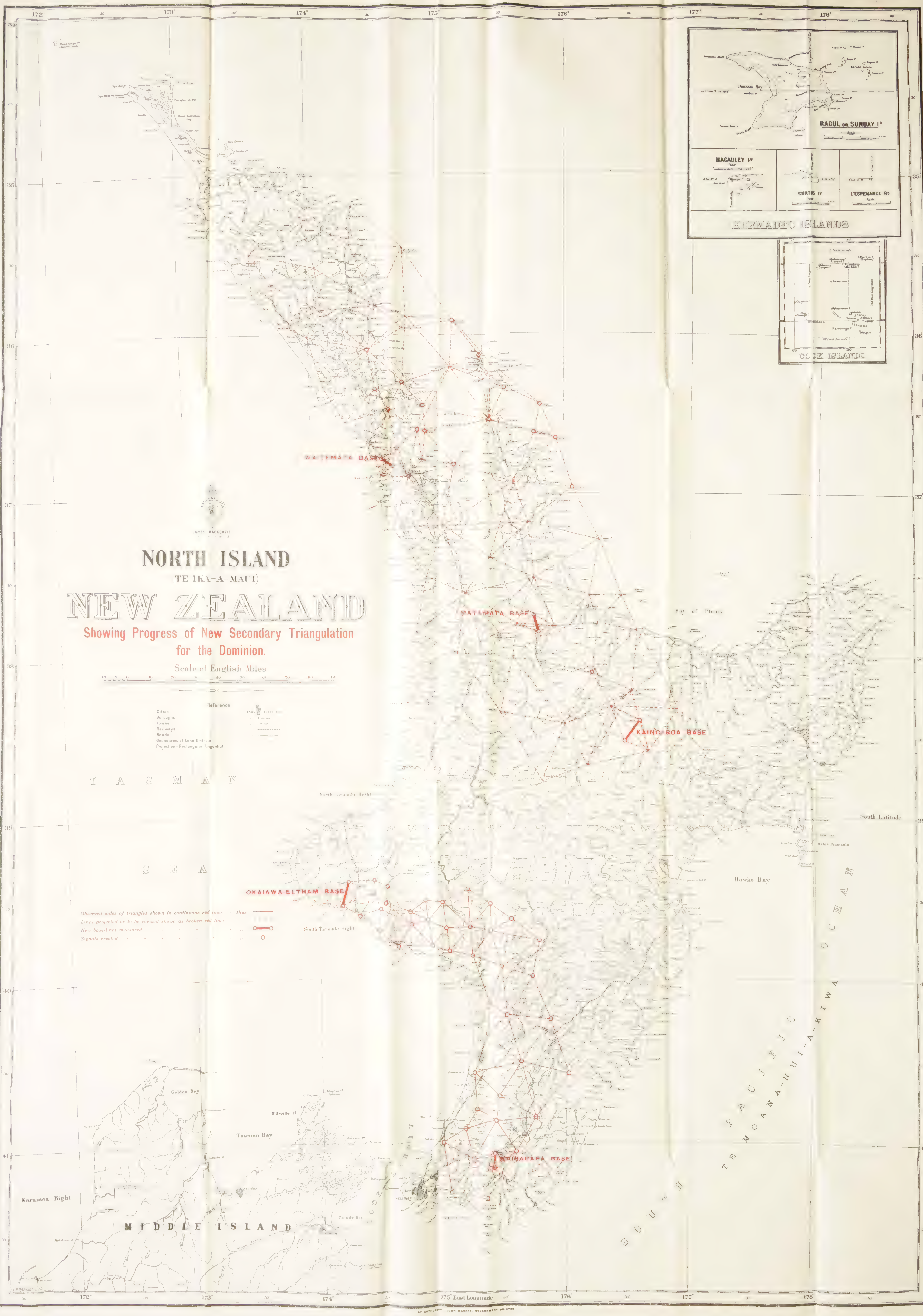
No.	Angle.	Observers.	No.	Angle.	Observers.
1	45° 58′ 28·96″	8 G.	6	81° 42′ 12·77″	6 G.
2	46 16 12·70	4 G.	7	62 42 11·58	10 G.
3	87 45 16·11	6 G.	8	45 59 13·71	9 G, 4 L.
4	55 29 28·71	7 G, 4 L.	9	71 18 40·00	6 G.
5	42 48 17·81	6 G, 2 L.			

(17)	⅓ Δ Error.	(18)	⅓ Δ Error.	(19)	⅓ Δ Error.
45° 58′ 28·96″	+ 1·413″	55° 29′ 28·71″	+ 0·786″	62° 42′ 11·58″	− 1·412″
46 16 12·70	+ 1·413	42 48 17·81	+ 0·786	45 59 13·71	− 1·412
87 45 16·11	+ 1·413	81 42 12·77	+ 0·787	71 18 40·00	− 1·413
179 59 57·77		179 59 59·29		180 00 05·29	
Sph. ex. 2·009		Sph. ex. 1·649		Sph. ex. 1·053	
− 4·239		− 2·359		+ 4·237	

NOTES.—8 G refers to number of complete sets of observations by Mr. H. E. Girdlestone; 7 G, 4 L refers to combined number of complete sets of observations by Mr. H. E. Girdlestone and Mr. H. J. Lowe, the mean being obtained as follows:—

Mean of Mr. Girdlestone's sets = 55° 29′ 29·16″ × 7 = 204·12″
Mean of Mr. Lowe's sets = 55 29 27·91 × 4 = 111·64
11) 315·76
55.29.28.71

South Latitude
39°
30'
Table Cape
Mahia Peninsula
OCEAN
Ana Taumaraukura
Maungaku
Tongariro
Pukeonaki
Hauhangatahi
Ruapehu
Ruapehu Nd
Paretetaitonga
Raetihi
Ohakune
Karioi
Tuhirangi
Teakaka
Tokopapa
Mangaituroa
Makahiwi
Ruahine
Huakainga
Owairua
Maungaroa
Te Rango
Murumuru
Taurewa
Ngamuku
Kourahi
Te Kohai
Ihupiri
Mangamahu
Hautawa
Wharehanga
Rangiriri
Kamokoriki



JAMES MACKENZIE

NORTH ISLAND

(TE IKA-A-MAUI)

NEW ZEALAND

Showing Progress of New Secondary Triangulation for the Dominion.

Scale of English Miles

Reference

Cities ... thus WELLINGTON
Boroughs ... Marton
Towns ... Hunterville
Railways
Roads
Boundaries of Land Districts
Projection - Rectangular Tangential

Observed sides of triangles shown in continuous red lines - thus
Lines projected or to be revised shown as broken red lines
New base-lines measured - - - - - - - ,,
Signals erected - - - - - - - - ,,

BY AUTHORITY: JOHN MACKAY, GOVERNMENT PRINTER.

Least-square Calculation of Polygon.

1. No. of Angle.	2. Observed Spherical Angles.*	3. Centre Spherical Angles.	4. $\frac{1}{3}$ Correction Spherical Excess.	5. Corrected Plane Angles.	6. Least-square Correction.	7. Final Plane Angles.	8. Cot.	9. a, b, ϵ.	10. Value 1″.	11. Natural Sines of Column 5.	12. 6×10.	13. Natural Sines of Column 7.	14. Sides.	15. Links.
	° ′ ″	° ′ ″	″	″	″	° ′ ″								
1	45 58 30·373	119 13 52·592	− 0·670	29·703	+ 1·034	45 58 30·737	+ 0·967	$a_1 = + 2·891$	33·7	0·7190356	+ 35	0·7190391	$P\ P_1$	139568·98
2	46 16 14·113		− 0·670	13·443	− 0·218	46 16 13·225	+ 0·957	$b_1 = − 2·881$	33·5	0·7226102	− 7	0·7226095	$P\ P_2$	140262·01
3	87 45 17·523	87 45 17·523	− 0·669	16·854	− 0·816	87 45 16·038		$c_1 = − 0·010$				0·9992321	$P_1\ P_2$	193955·80
	180 00 02·009			00·000		180 00 00·000						194104·85		
4	55 29 29·496		− 0·550	28·946	+ 0·940	55 29 29·886	+ 0·688	$a_2 = + 2·456$	27·5	0·8240409	+ 26	0·8240435	$P\ P_2$	140262·01
5	42 48 18·596		− 0·550	18·046	− 0·211	42 48 17·835	+ 1·080	$b_2 = − 2·848$	35·5	0·6795054	− 7	0·6795047	$P\ P_3$	115659·79
6	81 42 13·557	81 42 13·557	− 0·549	13·008	− 0·729	81 42 12·279		$c_2 = + 0·392$				0·9895344	$P_2\ P_3$	168430·53
	180 00 01·649			00·000		180 00 00·000						170211·90		
7	62 42 10·168		− 0·351	09·817	+ 0·840	62 42 10·657	+ 0·516	$a_3 = + 1·998$	22·3	0·8886391	+ 19	0·8886410	$P\ P_3$	115659·79
8	45 59 12·298		− 0·351	11·947	− 0·124	45 59 11·823	+ 0·966	$b_3 = − 2·448$	33·7	0·7191779	− 4	0·7191775	$P\ P_4$	93603·51
9	71 18 38·587	71 18 38·587	− 0·351	38·236	− 0·716	71 18 37·520		$c_3 = + 0·450$				0·9472686	$P_3\ P_4$	123290·38
	180 00 01·053	360 00 02·259		00·000		180 00 00·000						130153·56		

$\epsilon_0 = + 2·259''$

$\Sigma\,(a^2 + b^2 + c^2) = 41·142.$

Sin 1 sin 4 sin 7 from column 9 = ·5265317,$_7$
Sin 2 sin 5 sin 8 from column 9 = ·3531290,$_1$

$$\frac{139568·98 \times ·3531290,_1}{·5265317,_7} = 93604·71$$

$$\begin{array}{r} 93604·71 \\ 93603·51 \\ \hline - 1·20 \end{array} = 0·10 \text{ links per mile.}$$

$$\therefore \epsilon = \frac{- 1·20}{93603·51} = - ·00001282 \text{ radians};$$

$$\therefore \epsilon = - ·00001282 \times 206265 = - 2·644''$$

$$\begin{aligned} h &= c_1 + c_2 + c_3 &&= + \ 0·832 \\ 2k &= \tfrac{1}{3}\Sigma\,(a_2 + b_2 + c_2) &&= + 13·714 \\ i & &&= + \ 3 \\ \epsilon_0 & &&= + \ 2·259 \\ \epsilon & &&= - \ 2·644 \end{aligned}$$

$$\therefore \quad \begin{aligned} ·832\,P + 6\,Q + 2·259 &= 0 \\ 13·714\,P + ·832\,Q - 2·644 &= 0 \end{aligned}$$

$$\therefore P = + 0·217 \qquad Q = - 0·407$$

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* Corrected for $\frac{1}{3}$ triangle errors.

ELECTRICAL MEASUREMENT OF TEMPERATURE OF STEEL AND INVAR MEASURING-BANDS.

In conjunction with Professor T. H. Laby, experiments are being carried out at Victoria College on the electrical measurement of temperature of steel and invar measuring-bands. Two concrete blocks have been put in 4 chains apart; one block is 2 ft. square on the bottom, 10 in. square on top, and 2 ft. 6 in. high, while the other is 3 ft. square on the bottom, 10 in. square on top, and 6 ft. high; the difference in size being necessary owing to the slope of the ground. These blocks carry the marks with which the bands are compared. High-power microscopes are mounted over the marks. The bands are supported at every chain on large wheels 3 in. in diameter mounted on ball-bearings and insulated. The bands are anchored to a straining-post at one end, and are strained by weights at the other end. An electric current from a small accumulator is sent through the steel band, and returns by a piece of insulated flexible copper wire, and passes through a sensitive galvanometer and a resistance-box. The variation of the temperature of the steel band alters its resistance, and by measuring the resistance the true temperature of the band is obtained. Preliminary experiments seem to show that the results will be of high accuracy, and that a portable and convenient field outfit can be designed for use on base measurements and on standard surveys.

STANDARD BAR AND COMPARATOR.

This apparatus was obtained from the Cambridge Scientific Instrument Company, England, and will be the final standard of length for the measurements of the bases of the triangulation. The copies of the certificates of examination give a good description of the apparatus and show its high accuracy.

National Physical Laboratory, Teddington, England.—Copy of Certificate of Examination of a 10-link Scale.

For Lands and Survey Department, Wellington, New Zealand.

Description: H form section. Total length, 207 cms.; width, 3 cms.; depth, 3 cms. Four pairs of brass supports fit into the groove of the bar and act as holders for thermometers.

Marked: On front—Standard Bar No. 1, Lands and Survey Department, Wellington, New Zealand, Made by the Société Genevoise, Geneva, for the Cambridge Scientific Instrument Company, Limited. On back—Acier Nickel 43% Coulée 2432. 162. No. 9407.

Graduations: The graduations are on the neutral plane of the bar, and are marked and numbered at each $\frac{1}{10}$ link throughout. The ends are engraved A and B, left and right respectively. At end A a space from $\frac{1}{20}$ of a link to the left of the zero mark to the 0·1-link mark is divided to 0·001 of a link. At end B a space from 9·9-link mark to $\frac{1}{20}$ of a link to the right of the 10-link mark is divided to 0·001 of a link. The spaces for 0·02 of a link on either side of each link-graduation are also divided to 0·001 of a link.

The scale, symmetrically supported on two rollers 118 cms. apart, has been compared with the Laboratory standards, and the lengths at 0° Centigrade between the various link-graduations have been found to be as given below:—

Graduations.		Actual Lengths at 0° C. Links.
0 — 1	..	$1{\cdot}00001_3$
0 — 2	..	$2{\cdot}00004_1$
0 — 3	..	$3{\cdot}00003_4$
0 — 4	..	$3{\cdot}99999_7$
0 — 5	..	$5{\cdot}00002_3$
0 — 6	..	$6{\cdot}00002_3$
0 — 7	..	$7{\cdot}00001_6$
0 — 8	..	$7{\cdot}99996_5$
0 — 9	..	$8{\cdot}99991_9$
0 — 10	..	$9{\cdot}99992_4$

The above results may be relied on as accurate, for the shorter lengths to within about 3 units, and for the longer lengths to within about 5 units in the last (dropped) decimal place.

The coefficient of linear dilatation of this scale has been determined between the temperatures 0° C. and 31° C, and the length of the scale at other temperatures than 0° C. has been found to be given by the following formula:—

$$Lt = Lo\,(1 + 0{\cdot}00000714\,t + 0{\cdot}000{,}000{,}000{,}39\,t^2)$$

the temperature being expressed in the hydrogen scale.

(Signed) R. T. GLAZEBROOK, Director.

September 25th, 1912.
Ref. M 105, 46.

National Physical Observatory, Teddington, England.—Copy of Certificate of Examination of a 10-link Comparator.

For the Lands and Survey Department, Wellington, New Zealand.

Description: This instrument consists of a firm base carried on three levelling-screws. A nickel-steel shaft, somewhat longer than 10 links, is supported on four hardened-steel rollers, which are connected to the base, and which allow free longitudinal movement of the shaft. Two microscopes, placed any distance apart from 6 cms. to 208 cms., can be gripped in the shaft. The position of the microscope shaft is controlled by a micrometer-screw, suitably mounted on the base, two springs keeping the shaft and the end of the micrometer-screw in contact with the two ends of a connecting-rod.

Makers: The Cambridge Scientific Instrument Co., Ltd.

Marked: The Cambridge Scientific Instrument Co., Ltd., Cambridge, England, No. 14338 NP 9406.

This instrument has been examined at the Laboratory, and its workmanship has been found to be satisfactory.

The coefficient of expansion of the nickel-steel shaft has been determined, and its mean value between the temperature 1° C. and 30° C. has been found to be $0{\cdot}000{,}004_0$ per 1° Centigrade.

CALIBRATION OF THE MICROMETER.

The micrometer-screw, as mounted in the comparator, has been calibrated, one of the microscopes belonging to the comparator being set to known distances on one of the Laboratory line standards. During this calibration the micrometer was screwed against the pressure of the springs designed to keep the end of the movable shaft in contact with the end of the screw.

(*a.*) *On the Millimetre Scale.*—The pitch of the screw is approximately 0·5 mm. and the drum is divided into 250 parts: hence one division represents 0·002 mm.

Table 1 gives the corrections to be applied to the readings to annul the progressive error of the screw.

TABLE 1.

Reading of Drum on the Millimetre Scale.	Correction to the Reading.
	Millimetres.
0·0000	$0{\cdot}000_0$
1·0000	$-0{\cdot}000_4$
2 0000	$-0{\cdot}001_2$
3·0000	$-0{\cdot}002_4$
4·0000	$-0\ 004_0$
5·0000	$-0{\cdot}004_6$
6·0000	$-0{\cdot}005_8$
7·0000	$-0{\cdot}007_4$
8·0000	$-0{\cdot}009_6$
9·0000	$-0{\cdot}010_4$
10·0000	$-0{\cdot}010_8$

The micrometer-screw has also a periodic error, which has been found to repeat in each successive revolution of the drum.

Table 2 gives the necessary corrections to the readings.

TABLE 2.

Reading on the Drum on the Millimetre Scale.	Approximate Value of Reading.	Correction.
Divisions.	Millimetres.	Millimetres.
0	0·00	$0{\cdot}000_0$
20	0 04	$+\ 0{\cdot}000_7$
10	0·08	$+\ 0\ 000_9$
60	0·12	$+\ 0\ 000_7$
80	0·16	$0{\cdot}000_0$
100	0·20	$-\ 0{\cdot}001_4$
120	0·24	$-\ 0{\cdot}002_9$
140	0·28	$-\ 0{\cdot}004_1$
160	0·32	$-\ 0{\cdot}004_6$
180	0·36	$-\ 0{\cdot}004_2$
200	0·40	$-\ 0{\cdot}003_3$
220	0·44	$-\ 0{\cdot}002_0$
240	0·48	$-\ 0{\cdot}000_5$
250	0·50	$0{\cdot}000_0$

To obtain the correct value from any reading on this scale it is necessary to add, algebraically, to the reading the corrections of Tables 1 and 2. For example, the reading 4 mm. + 100 divisions becomes $(4{\cdot}200 - 0{\cdot}004 - 0{\cdot}001_4) = 4{\cdot}1946$ mm. when corrected.

(*b.*) *On the Link Scale.*—This scale is inclined to the axis of the micrometer-screw at about 60°. One division of the drum read on this scale represents 0·00001 of a link.

The progressive error of the screw is corrected by applying the corrections of Table 3 to the readings taken in this scale.

TABLE 3.

Reading of Drum on the Link Scale.	Correction to the Reading.
	Links.
0·000	$0{\cdot}00000_0$
0·005	$-\ 0{\cdot}00000_3$
0·010	$-\ 0{\cdot}00000_7$
0·015	$-\ 0{\cdot}00001_4$
0·020	$-\ 0{\cdot}00002_1$
0·025	$-\ 0{\cdot}00002_5$
0·030	$-\ 0{\cdot}00003_0$
0·035	$-\ 0{\cdot}00003_9$
0·040	$-\ 0{\cdot}00005_0$
0·045	$-\ 0{\cdot}00005_4$
0·050	$-\ 0{\cdot}00005_6$

Since more than a revolution of the screw is required to give 0·0025 link, the periodic error does not quite repeat on this scale, and in Table 4 are given the values of corrections to be applied to readings at various points of the scale.

TABLE 4.

Reading on Drum on Link Scale.	Corrections to Readings from				
	0 to ·01.	·01 to ·02.	·02 to ·03.	·03 to ·04.	·04 to ·05.
Division.	Links.	Links.	Links.	Links.	Links.
0	$\cdot00000_{0}$	$\cdot00000_{0}$	$\cdot00000_{0}$	$\cdot00000_{0}$	$\cdot00000_{0}$
20	$+\cdot00000_{3}$	$+\cdot00000_{2}$	$+\cdot00000_{1}$	$+\cdot00000_{1}$	$\cdot00000_{0}$
40	$+\cdot00000_{4}$	$+\cdot00000_{2}$	$+\cdot00000_{1}$	$\cdot00000_{0}$	$-\cdot00000_{1}$
60	$+\cdot00000_{3}$	$\cdot00000_{0}$	$-\cdot00000_{2}$	$-\cdot00000_{4}$	$-\cdot00000_{6}$
80	$-\cdot00000_{1}$	$-\cdot00000_{5}$	$-\cdot00000_{8}$	$-\cdot00001_{1}$	$-\cdot00001_{3}$
100	$-\cdot00000_{9}$	$-\cdot00001_{3}$	$-\cdot00001_{6}$	$-\cdot00001_{8}$	$-\cdot00002_{0}$
120	$-\cdot00001_{6}$	$-\cdot00001_{8}$	$-\cdot00002_{2}$	$-\cdot00002_{5}$	$-\cdot00002_{6}$
140	$-\cdot00002_{2}$	$-\cdot00002_{4}$	$-\cdot00002_{6}$	$-\cdot00002_{7}$	$-\cdot00002_{7}$
160	$-\cdot00002_{4}$	$-\cdot00002_{4}$	$-\cdot00002_{5}$	$-\cdot00002_{5}$	$-\cdot00002_{4}$
180	$-\cdot00002_{2}$	$-\cdot00002_{1}$	$-\cdot00002_{1}$	$-\cdot00002_{0}$	$-\cdot00001_{9}$
200	$-\cdot00001_{6}$	$-\cdot00001_{5}$	$-\cdot00001_{5}$	$-\cdot00001_{4}$	$-\cdot00001_{2}$
220	$-\cdot00001_{0}$	$-\cdot00000_{9}$	$-\cdot00000_{7}$	$-\cdot00000_{6}$	$-\cdot00000_{5}$
240	$-\cdot00000_{3}$	$-\cdot00000_{2}$	$-\cdot00000_{2}$	$-\cdot00000_{1}$	$-\cdot00000_{1}$
250	$\cdot00000_{0}$	$\cdot00000_{0}$	$\cdot00000_{0}$	$\cdot00000_{0}$	$\cdot00000_{0}$

In the case of a large number of readings being taken, it is sufficient, as a rule, to correct the mean reading from Table 1 or Table 3 only. It is only necessary to correct the individual readings from Table 2 or Table 4 when the highest accuracy is required.

September 25th, 1912. (Signed) R. T. GLAZEBROOK, Director.
Ref. M. 105, 62.

Mr. John Langmuir, Inspector of Surveys, reports that under the heading of secondary triangulation his work for the year has been only of a preparatory nature—viz., in the visiting of positions in the proposed scheme of triangulation, and with the erection of large permanent signals at twenty-one of the stations. In this connection the following islands lying off the east coast of the Auckland District were visited—viz., one of the Mokohinau Group, Great Barrier, Cuvier, Great Mercury, Red Mercury, and Flat Island of the Aldermen Group. Signals have since been erected on these islands. At the Great Barrier Island it was discovered that many of the old minor trig. stations were much in need of attention, while in some cases the tubes were entirely missing. A contract has been let to effect the necessary repairs. Apart from this, the country some 96 miles north of Auckland has been travelled over, and proposed stations visited to ensure that they are reciprocally visible from one another. The area covered by this triangulation—of which so far the positions of stations have been examined and part of the signals built—will be nearly three million acres of land and water.

The work of laying down suitable base-lines—reference to which has been made in previous yearly reports—has been continued on the last base chosen, viz., that on the Kaingaroa Plains. Up to the 31st March the total chainage completed at this base was 11·94 miles, of which 2·74 miles was done last year. To ensure accuracy as far as possible this mileage was gone over four times, which means that a total distance of 47·76 miles was chained.

It is desirable that another base be measured in North Auckland if a suitable one can be obtained. The most likely country will, I think, be about the Kerikeri, Bay of Islands, or Waimate North. This base should be the last required in the North Island.

APPENDIX IV.

REPORT ON EXPLORATION TRIP, DIRECT ROUTE, LAKE WAKATIPU TO MILFORD SOUND.

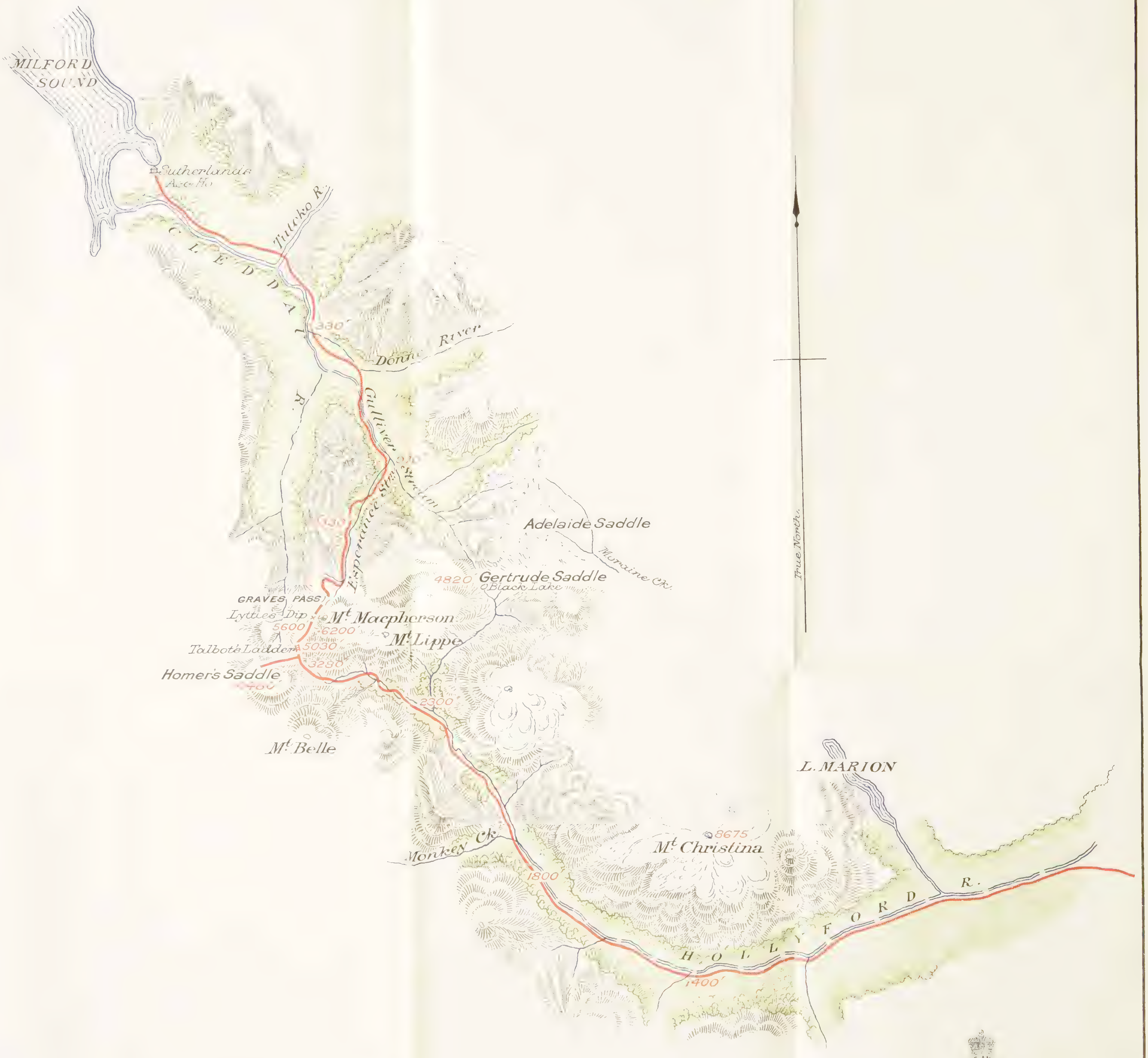
[By D. MACPHERSON, District Surveyor.]

THE plan accompanying this report is not intended for an accurate presentment of the route, such as could be obtained from a prismatic and chain traverse, but is simply a sketch, from prismatic bearings of main direction of the valleys, &c.

As there is a well-known pack-track from Elfin Bay, on Lake Wakatipu, up the Greenstone River to Lake Howden, at its source, a distance of about twenty-five miles, I will confine my report to the country to the west of this.

Leaving Lake Howden on the morning of the 28th December, 1912, accompanied by Guide Lippe, of the Hermitage staff, Mount Cook, and under the able guidance of Messrs. Grave and Talbot, we set out with a 47 lb. swag and an ice-axe each. Rain had just commenced as we started, which made the bush wet, and obscured the view of surrounding mountains. Leaving the Hollyford track after less than half a mile, we struck westward and downwards towards the Hollyford River; the going was fairly good, and the fall about 1,000 ft. The river is here a chain and a half or more in width, with a rapid flow of from 2 ft. to 4 ft. of water, its course being fairly direct. We kept up the southern side of the Hollyford River right up to Monkey Creek. The route lay through flat bush at first, till after the outlet from Lake Marion is passed, when a high bluff obstructs the passage; this can be negotiated close to the river, then a succession of rather steep sidelings is met, and we were glad to avail ourselves of the first strip of flat ground to pitch camp.

C-IA.



Sketch Plan of Part of Wakatipu to Milford Route.

Surveyed by D. Macpherson, Dist. Surveyor

4 · 2 · 1913

Scale: 1 Mile = 1 Inch

Heights in Red figures are Barometric.

JAMES MACKENZIE.
Surveyor General

Drawn by H. E. Taylor, April 1913.

By Authority: John Mackay, Government Printer

G. H. M. McClure, Chief Surveyor, Southland

H. I. McCardell, Chief Draughtsman, Head Office, Wellington

1500-5.13-278

Next morning being fine, the bush soon dried, and walking was more pleasant. We passed a large creek, with fine falls, coming in from the left. From this point the going was sometimes on sideling, with small flats, and short stretches along boulders at side of river, until the first elbow was reached, just above a rather rapid fall in river-bed. From here a magnificent view is obtained of the towering Mount Christina, with its snowfields and overhanging glaciers, the summit being apparently in close proximity to the river, but over 7,000 ft. above. The Hollyford is very much like the Clinton Valley in general description, but the distance to be traversed is less, and the mountains on the northern face are far more magnificent, with their additional height and overhanging glaciers, from which avalanches are frequently precipitated over the cliffs below. The going for some stretches above this is indescribably slow—the bush becomes more mixed with ribbonwood, with high ferns, which are best walked *on* from top to top. Here and there are patches of huge stones between which the bush has grown. The sidelings, however, are not steep, and now and again the walking is good.

We camped the next night half a mile or so below Monkey Creek. In the morning we were soon out of the bush and on to a well-grassed flat about 50 or 60 chains in length, containing about 100 acres, and infested with rabbits. There were signs of hares also, but we did not see any. Bird-life in this valley is very scarce; we saw no wekas or other ground birds, only paradise and blue duck, and keas. Above this is a short patch of stunted bush, low mountain totara, veronica, and box, with birch. Another open patch of similar extent is then reached, over which alpine flowers grow in profusion. At the head of this is some open birch bush rising more rapidly over a terminal moraine, above which the valley flattens out at the forks. Immediately in front Mount Lippe rises in a sheer angular cliff for 2,000 ft. or more, above which is a fine glacier and snow-capped summit of considerable extent. Here we had an incessant twenty-four hours genuine West Coast downpour, which started the avalanches going, often in quick succession.

On the following afternoon we made an excursion to the Gertrude Saddle, 4,820 ft., a fairly easy climb; one can go on either side of the creek at first, but should afterwards cross to the north side. When at Black Lake, a narrow basin of about 100 yards diameter, the easier way is to climb round rocks close to the north of the lake to snowfield, which leads by an easy ascent to the saddle. Here a most glorious panorama opens out—the most beautiful I have seen from any pass. You look down the Cleddau Valley to Milford Sound, about two-thirds of which can be seen, with Stirling Fall, Mounts Pembroke, Tutoko, and Underwood—which last is a fine mountain from this side. Just to the north-west, and apparently within a few hundred yards, is the Adelaide Saddle, at the headwaters of Moraine Creek. The cliff between is vertical, but it might be possible to traverse a route over the mountain. The Gertrude is the saddle where Quill is supposed to have lost his life in attempting the descent on the other side.

On the following morning—1st January, 1913—Lippe got us out at 2 a.m., when we had breakfast and made an early start for Homer Saddle, which we reached without difficulty. From the head of the Hollyford Valley to Homer Saddle is a rise of 1,200 ft. The climb to Homer Saddle is straight up on loose good-holding rocky fan. Homer Saddle is 4,480 ft. The outlook on the other side is rather circumscribed; the descent appears to be sheer, looking from the saddle. Here we saw Quill's cairn, with stump of a stick on which is cut his name, "W. Quill," still legible though the wood is nearly rotten.

It has been found quite impossible to climb down the western face of Homer Saddle, as the cliff falls away almost sheer, for what I would judge to be 1,500 ft. to 2,000 ft., to where a steep snow-grass slope leads down to the head of the Cleddau River. As the rock slope is not quite perpendicular, and is very even, there would be nothing but the cost and necessary time to prevent a zigzag sideling from being blasted out of the face, at any grade that might be required. Of course, on a similar basis a tunnel could be run through from foot to foot, which would eventually make a pack-track possible; it would, however, have to be from 600 to 700 yards in length, with substantial fall towards the Cleddau River. Both these alternatives would, to my mind, rob the route of its most attractive part. From Homer Saddle the route runs northward up the very steep rocky spur to an elevation of 5,030 ft.

During this ascent, which we named "Talbot Ladder," we were coupled together by rope. The rock is fairly good holding, but the climbing is necessarily slow, as only one can move at a time. The distance up this was estimated at about 15 chains, and for safety it would be necessary to let in iron pipes, which could be connected by steel ropes. Footholds or steps should also be cut out of the rock or the snow-grass. A very fine view is obtained during this climb of the glacier towards Mount Lippe, which seems very close below.

On arrival at the easier slope we unroped, and proceeded in a northerly direction round the western face for about 200 yards, first over loose rocky slopes, and then up a steep snow slope. At rocks on this we had lunch and left our swags, afterwards climbing a snow-covered mountain, 6,200 ft., which we named Mount Macpherson. From it a most beautiful view is obtained. To the south-west rise numberless snow-clad peaks, among which is what we took to be Mount Balloon; on the west, Mitre Peak and Mount Sheerdown; then, northwards, Mounts Pembroke, Tutoko, Underwood, and countless other peaks of similar altitude, culminating in what we took to be Mount Aspiring; in the nearer north-east Mount Lippe with its glaciers, and eastward the magnificent pile of Mount Christina, with Mount Belle in the south-east. The valleys of the Hollyford and Cleddau Rivers, with those of their tributaries, lie spread out below us like a map, while the hollow of the Adelaide Saddle is visible, falling towards Moraine Creek, but the Gertrude Saddle is hidden behind a shoulder of Mount Lippe.

An easy downhill walk brought us again to our swags, and we proceeded in a northerly direction across the snow for a hundred yards or so, then over some shingle-slopes below a bluff, and on to snowfields which, except for a few crevasses, extend unbroken for about half a mile, where another spur is crossed at Lyttle Dip, 5,600 ft. Here there is a hole in the rock just large enough to allow one to crawl through with a swag, when a yawning abyss is encountered. A few yards, however, brings one to a natural shelf which leads to the right, down the cliff, to another snowfield of about a quarter of a mile in extent. Along this the grade is practically level and the going good. This brings us to Grave Pass, on another spur, the crest of which has to be traversed for 4 or 5 chains until the pass is reached. From this a fine view of the Esperance Valley is obtained, towards which the route now leads, by a narrow snow-grass shelf leading to the right, and then doubling to the left and downwards. After this a series of shelves are negotiated leading up towards the crown of the ridge again and to the left, within a few hundred feet of it. I think that the shelf to the left, close up under the cliff, is the better here; we took the lower one, which leads along the brow of a 2,000 ft. precipice, and is in places rather close and bare to be pleasant climbing. After pursuing a downward grade on wider shelves, a gutter is reached, down which a straight course may be maintained with safe climbing. Ropes are not needed now, and a faster pace can be indulged in, the route being in the direction of the waterway, with one sharp double to the left, to get down off a rounded spur. Near the bottom a cliff has to be avoided by a slight detour to the right. From here on we found our way down in the dark to small bush to the right of the creek, and below the falls, 2,330 ft., our camping-ground, which was not reached till 10 p.m. By the time the billy was boiled we did not feel like pitching camp, so just turned into our sleeping-bags.

I may mention that the snowfields referred to slope down to the edge of what appears to be a perpendicular cliff of great height, overhanging and running parallel to the Cleddau Valley. It is possible that a practicable route may be found below some of these snowfields, close to the brow of the cliff, where two high bluffs appear to bar the way, but might be negotiated. However, I think that even if so it would not be so safe or enjoyable a route, as avalanche snow might be encountered, and I believe that the snow walking is really the safer, when once one gets used to the first feeling of insecurity. The route we traversed is evidently over safe snow—that is, free from avalanches—as it is near a rock wall on upper side. The cost of formation would also be nil, and the snow walking and opportunities for glissading would, I have no doubt, be appreciated by a large number of tourists.

Leaving camp fairly late on the morning of the 2nd January, 1913, our way lay for half a mile or less down the bed of the Esperance River until the fall became too great and the boulders too large to negotiate, when we took once more to the bush. Here we made our way towards the rocky wall to our right, where we struck a watercourse, which led us in the right direction as it joined the Esperance River just as it debouches from its narrow gorge. Soon the Esperance joins the Gulliver River (970 ft.), whence a good view of the Gertrude and Adelaide saddles may be obtained. They certainly look no more promising from below than from on top—though an adjacent saddle to the north of the Adelaide, and also leading into Moraine Creek, appears as though it might be climbable. From here on the walking is good and the fall ever getting less. We made a mistake in bearing to the right, which immediately took us beside the Donne River, here running in a deep gorge, and at a much lower level. We struck the Cleddau River about a quarter of a mile below its junction with the Gulliver River. From here to Milford the going was much the easiest walking on the route, cattle-tracks and open bush being everywhere found, excepting about 10 chains of bluff round the Cleddau River. I must mention the view of Mount Tutoko which we obtained from the shingle-beach, about a quarter of a mile above the junction of the Tutoko and Cleddau Rivers, which is probably unsurpassed as a view of a single mountain anywhere in New Zealand. The Tutoko carries more water than the Cleddau River, is about 2 chains wide, and, being over 3 ft. deep and very swift, we found it bad enough to ford. We thought that the better route for a track would be along the southern side of the Cleddau River all the way, which could be more easily forded near Sutherlands.

From the Tutoko River to Sutherlands, Milford, is about two miles of easy walking, and we reached our destination in good time. On this latter track there is a small portion of 4 chains or so that should be reconstructed, as in its present state it is an awkward scramble on what is otherwise an easy and pleasant walk. Two men could vastly improve it in a week's work.

With regard to the practicability or otherwise of this as a tourist route, I might as well at once confess myself an absolute new chum at this sort of climbing, so the fact of my having come over it with a 50 lb. to 30 lb. swag without slip or misadventure of any kind makes it apparent that the average man, if in good company, could do the same thing. If a track up the valleys similar to that from Lake Howden to Glade House were made, and the worst places over the pass improved by narrow side cuttings, steps, or footholds, as required by local conditions, with iron bars or pipes let in, with wire rope attached at the most dangerous places, huts built at the head of the Hollyford and Esperance Valleys, I should say that with competent guides (who would be necessary) about half the people who now go over McKinnon Pass could with safety and pleasure, accomplish the return journey by this route. From the hut on Hollyford an interesting side journey to the Gertrude Saddle could be made; and, for the more ambitious, the trip to the summit of Mount Macpherson, while going over the pass, would be amply rewarded. Mount Lippe has not yet been climbed, but would be easy of access, while I believe a route from Homer to Gertrude Saddle over the mountain would be practicable, and possibly from Gertrude to Adelaide Saddle.

My remarks on the snow slopes *en route* are based on Guide Lippe's experience and advice.

The distance from Lake Howden to camp at forks of the Hollyford River is about twelve miles, thence to camp near head of the Esperance River about six miles or a little less; of this about 15 chains up Talbot Saddle, and, say, 40 chains from Grave Pass down towards the Esperance River, would be dangerous. Thence to Milford, about eight miles, or a total of about twenty-six miles, or much the same distance as from Lake Howden to Glade House. My distances are only estimates from point to point, as any measurements under the conditions were out of the question.

Messrs. Grave and Talbot deserve every credit for their persistence in finding this route over the mountain, as several attempts were unsuccessful. Their route up Talbot Ladder and along snowfields was first suggested after examination of photographs taken from the other side of the Cleddau Valley. I saw some places that they had climbed down that I am sure I could not be induced to tackle. The most wonderful part of the route, I think, is from Grave Pass down, which, viewed from below, seems impracticable.

My thanks are due to them, and to Guide Lippe, for their comradeship throughout, and for their ready assistance in the most dangerous places.

APPENDIX V.

TIDAL SURVEY.

[By C. E. Adams, M.Sc., F.R.A.S.]

Harmonic Analysis.

The harmonic tidal constants for the ports of Wellington and Auckland have been obtained by harmonic analysis from the hourly ordinates measured from the self-registering tide-gauges. In each case the period of observation was one year; Wellington for the year 1909, and Auckland for the year beginning 1908, December, 1.

Harmonic Tidal Constants.

——		Wellington.	Auckland.	——		Wellington.	Auckland.
Latitude ...		41° 17′ S.	36° 50′ S.	...		...	...
Longitude ...		174° 46′ E.	174° 49′ E.	...		...	...
A_0		37·931 ft.	9·237 ft.	...		...	...
S_1	H	0·005	0·006	Q	H	0·036 ft.	0·008 ft.
	κ	151·36	50·35		κ	26·35	56·64
S_2	H	0·112	0·583	L	H	0·093	0·221
	κ	332·98	264·36		κ	141·99	209·57
S_4	H	0·005	0·018	N	H	0·431	0·797
	κ	181·34	340·80		κ	95·47	173·55
S_6	H	0·005	0·002	ν	H	0·125	0·236
	κ	298·67	27·47		κ	107·37	152·81
M_1	H	0·007	0·011	μ	H	0·082	0·126
	κ	30·85	143·63		κ	81·28	178·00
M_2	H	1·594	3·814	R	H	0·024	0·024
	κ	133·65	203·73		κ	169·69	237·40
M_3	H	0·022	0·052	T	H	0·056	0·058
	κ	184·01	202·32		κ	317·20	102·91
M_4	H	0·030	0·113	MS	H	0·039	0·169
	κ	275·89	126·80		κ	137·58	194·56
M_6	H	0·013	0·026	2SM	H	0·039	0·064
	κ	76·55	282·96		κ	19·73	304·96
O	H	0·110	0·059	Mm	H	0·116	0·127
	κ	33·66	148·79		κ	260·23	291·98
K_1	H	0·078	0·233	Mf	H	0·048	0·072
	κ	77·59	168.93		κ	172·03	204·75
K_2	H	0·042	0·145	MSf	H	0·161	0·075
	κ	312·25	255·18		κ	60·87	122·80
P	H	0·023	0·068	Sa	H	0·049	0·091
	κ	53·04	166·21		κ	201·65	62·55
J	H	0·007	0·017	Ssa	H	0·073	0·028
	κ	143·21	196·39		κ	165·59	56·77

Values of H are in English feet, κ in degrees.

Prediction.

From the harmonic tidal constants the tides for Wellington and Auckland have been predicted, using the method described in the Tidal Survey Reports for 1910–11 and 1911–12. The tide-tables for these two ports for the year 1914 are given here. They are supplied to the British Admiralty and published in the Admiralty Tide-tables, and to the Marine Department and published in the New Zealand Nautical Almanac and Tide-tables.

The time used in the tide-tables is New Zealand civil mean time for the meridian 11 h. 30 m. east of Greenwich; 0 h is midnight, 12 h is noon; all hours less than 12 are in the forenoon (a.m.), all greater are in the afternoon (p.m.), and when diminished by 12 give the times after noon—for instance, 14 h. 11 m. is 2 h. 11 m. p.m.

Wellington Tide-tables for 1914.

The heights, in feet and tenths, are measured from a point 36·131 ft. above the city datum, and approximately 1·8 ft. below mean sea-level.

Wellington Tide-tables for 1914—*continued.*

Date.	Day.	H.	m.	Ft.	H.	m.	Ft.	H.	m.	Ft.	H.	m.	Ft.
	January, 1914.												
1	Thursday	2	4	0·5	8	7	3·2	14	11	0·5	20	31	3·2
2	Friday	2	53	0·5	8	56	3·4	15	4	0·5	21	23	3·1
3	Saturday	3	40	0·5	9	44	3·1	15	53	0·4	22	9	3·2
4	Sunday	4	25	0·5	10	28	3·1	16	38	0·4	22	52	3·1
5	Monday	5	4	0·5	11	12	3·2	17	20	0·4	23	33	3·1
6	Tuesday	5	44	0·5	11	49	3·2	18	0	0·4	..		..
7	Wednesday	0	14	3·0	6	20	0·5	12	29	3·3	18	41	0·4
8	Thursday	0	57	3·1	6	59	0·6	13	13	3·4	19	26	0·5
9	Friday	1	41	3·2	7	41	0·6	14	1	3·5	20	13	0·5
10	Saturday	2	27	3·2	8	31	0·6	14	46	3·7	21	2	0·6
11	Sunday	3	13	3·3	9	15	0·6	15	36	3·7	21	50	0·6
12	Monday	4	5	3·3	10	5	0·6	16	28	3·8	22	43	0·6
13	Tuesday	4	57	3·4	11	3	0·6	17	22	3·8	23	40	0·5
14	Wednesday	5	53	3·4	12	1	0·4	18	20	3·7	..		..
15	Thursday	0	32	0·3	6	50	3·4	12	59	0·3	19	16	3·7
16	Friday	1	31	0·2	7	44	3·5	13	57	0·1	20	13	3·7
17	Saturday	2	24	0·1	8	41	3·6	14	54	0·0	21	7	3·7
18	Sunday	3	20	−0·1	9	34	3·7	15	50	−0·2	22	0	3·7
19	Monday	4	11	−0·2	10	27	3·7	16	44	−0·3	22	55	3·6
20	Tuesday	5	2	−0·3	11	19	3·7	17	36	−0·4	23	46	3·5
21	Wednesday	5	53	−0·3	12	10	3·7	18	28	−0·4	..		..
22	Thursday	0	37	3·5	6	43	−0·2	13	3	3·7	19	23	−0·3
23	Friday	1	29	3·4	7	36	−0·1	13	55	3·7	20	17	−0·1
24	Saturday	2	22	3·3	8	26	0·1	14	46	3·6	21	10	..
25	Sunday	3	14	3·2	9	16	0·2	15	38	3·6	22	1	0·2
26	Monday	4	5	3·2	10	10	0·4	16	32	3·5	22	58	0·4
27	Tuesday	5	3	3·0	11	7	0·5	17	31	3·4	23	57	0·5
28	Wednesday	6	0	3·0	12	2	0·6	18	26	3·3	..		..
29	Thursday	0	52	0·6	6	51	3·0	12	55	0·7	19	16	3·2
30	Friday	1	41	0·7	7	37	3·0	13	44	0·7	20	5	3·2
31	Saturday	2	23	0·7	8	26	3·0	14	31	0·6	20	54	3·1
	February, 1914.												
1	Sunday	3	7	0·7	9	8	3·1	15	20	0·6	21	38	3·1
2	Monday	3	48	0·6	9	51	3·2	16	4	0·5	22	17	3·1
3	Tuesday	4	24	0·6	10	29	3·3	16	44	0·4	22	55	3·1
4	Wednesday	4	59	0·5	11	10	3·4	17	21	0·4	23	34	3·1
5	Thursday	5	37	0·4	11	52	3·5	18	4	0·3	..		..
6	Friday	0	14	3·1	6	18	0·4	12	35	3·6	18	47	0·3
7	Saturday	1	1	3·2	7	0	0·3	13	22	3·6	19	35	0·3
8	Sunday	1	48	3·2	7	47	0·3	14	11	3·7	20	23	0·3
9	Monday	2	37	3·3	8	37	0·3	15	3	3·7	21	18	0·3
10	Tuesday	3	31	3·3	9	35	0·3	15	58	3·7	22	16	0·2
11	Wednesday	4	29	3·3	10	37	0·2	16	58	3·6	23	13	0·1
12	Thursday	5	30	3·3	11	40	0·1	17	58	3·7	..		..
13	Friday	0	12	0·1	6	28	3·5	12	42	0·1	18	58	3·8
14	Saturday	1	8	0·1	7	26	3·7	13	41	−0·1	19	54	3·8
15	Sunday	2	2	−0·1	8	23	3·8	14	38	−0·1	20	50	3·7
16	Monday	3	2	−0·2	9	17	3·8	15	36	−0·4	21	46	3·7
17	Tuesday	3	53	−0·3	10	10	3·9	16	28	−0·5	22	38	3·6
18	Wednesday	4	43	−0·4	11	2	3·8	17	21	−0·5	23	29	3·5
19	Thursday	5	33	−0·4	11	53	3·8	18	13	−0·5	..		..
20	Friday	0	20	3·4	6	22	−0·3	12	44	3·7	19	6	−0·3
21	Saturday	1	11	3·2	7	11	−0·1	13	36	3·6	19	59	−0·2
22	Sunday	2	4	3·1	8	7	0·1	14	27	3·4	20	53	0·1
23	Monday	2	54	3·0	8	59	0·2	15	19	3·3	21	47	0·3
24	Tuesday	3	46	2·9	9	51	0·4	16	13	3·1	22	44	0·5
25	Wednesday	4	39	2·8	10	46	0·6	17	10	3·1	23	38	0·6
26	Thursday	5	35	2·8	11	41	0·7	18	2	3·0	..		..
27	Friday	0	28	0·8	6	24	2·8	12	34	0·8	18	53	3·0
28	Saturday	1	15	0·8	7	11	2·9	13	21	0·8	19	44	3·0

WELLINGTON TIDE-TABLES FOR 1914—*continued.*

Date.	Day.	H.	m.	Ft.	H.	m.	Ft.	H.	m.	Ft.	H.	m.	Ft.
	March, 1914.												
1	Sunday	1	56	0·9	7	56	3·0	14	4	0·7	20	26	3·0
2	Monday	2	32	0·9	8	35	3·1	14	44	0·7	21	5	3·0
3	Tuesday	3	5	0·8	9	14	3·2	15	23	0·6	21	43	3·0
4	Wednesday	3	42	0·6	9	56	3·4	16	6	0·4	22	21	3·0
5	Thursday	4	19	0·5	10	33	3·5	16	46	0·3	22	58	3·1
6	Friday	4	55	0·3	11	14	3·5	17	26	0·2	23	38	3·2
7	Saturday	5	36	0·2	11	58	3·6	18	8	0·1	..		..
8	Sunday	0	22	3·2	6	25	0·1	12	47	3·6	18	59	0·1
9	Monday	1	11	3·2	7	16	0·1	13	40	3·6	19	52	0·0
10	Tuesday	2	7	3·3	8	13	0·0	14	33	3·6	20	47	0·0
11	Wednesday	3	3	3·4	9	12	0·0	15	34	3·7	21	16	0·1
12	Thursday	4	2	3·4	10	14	0·0	16	34	3·7	22	17	0·0
13	Friday	5	4	3·5	11	19	−0·1	17	35	3·7	23	18	0·0
14	Saturday	6	6	3·7	12	20	−0·1	18	35	3·8	..		..
15	Sunday	0	45	−0·1	7	5	3·9	13	20	−0·2	19	35	3·8
16	Monday	1	43	−0·2	8	2	4·0	14	19	−0·4	20	32	3·8
17	Tuesday	2	38	−0·3	9	0	4·1	15	15	−0·4	21	26	3·7
18	Wednesday	3	31	−0·3	9	52	4·0	16	10	−0·5	22	19	3·7
19	Thursday	4	24	−0·3	10	45	4·0	17	2	−0·5	23	9	3·5
20	Friday	5	13	−0·3	11	33	3·8	17	53	−0·4	23	58	3·3
21	Saturday	6	2	−0·2	12	25	3·6	18	46	−0·3	..		..
22	Sunday	0	48	3·1	6	53	0·1	13	15	3·4	19	38	−0·1
23	Monday	1	40	3·0	7	45	0·1	14	7	3·2	20	33	0·1
24	Tuesday	2	35	2·8	8	39	0·3	15	2	3·1	21	23	0·4
25	Wednesday	3	26	2·8	9	33	0·5	15	54	3·0	22	15	0·6
26	Thursday	4	16	2·7	10	31	0·7	16	47	2·9	23	9	0·8
27	Friday	5	9	2·8	11	25	0·9	17	41	2·8	23	55	0·9
28	Saturday	5	59	2·9	12	13	0·9	18	29	2·9	..		..
29	Sunday	0	39	1·0	6	42	3·0	12	58	1·0	19	11	2·9
30	Monday	1	16	1·1	7	21	3·1	13	35	0·9	19	50	2·9
31	Tuesday	1	46	1·0	7	57	3·3	14	11	0·8	20	21	3·0
	April, 1914.												
1	Wednesday	2	20	0·9	8	37	3·4	14	49	0·7	21	1	3·0
2	Thursday	3	1	0·6	9	18	3·4	15	34	0·5	21	40	3·1
3	Friday	3	43	0·5	9	58	3·6	16	14	0·3	22	21	3·2
4	Saturday	4	26	0·2	10	44	3·6	16	56	0·1	23	4	3·2
5	Sunday	5	10	−0·1	11	29	3·6	17	43	0·0	23	52	3·2
6	Monday	6	2	−0·1	12	19	3·6	18	34	−0·1	..		..
7	Tuesday	0	46	3·3	6	56	−0·2	13	14	3·6	19	24	−0·1
8	Wednesday	1	40	3·3	7	50	−0·2	14	12	3·6	20	19	−0·1
9	Thursday	2	38	3·4	8	49	−0·1	15	8	3·6	21	19	−0·1
10	Friday	3	37	3·5	9	53	−0·1	16	8	3·7	22	22	0·0
11	Saturday	4	39	3·7	10	58	−0·2	17	11	3·7	23	22	−0·1
12	Sunday	5	41	3·9	12	0	−0·2	18	13	3·8	..		..
13	Monday	0	22	−0·1	6	41	4·0	13	0	−0·3	19	11	3·8
14	Tuesday	1	18	−0·2	7	39	4·1	13	58	−0·3	20	6	3·8
15	Wednesday	2	11	−0·3	8	34	4·1	14	53	−0·4	21	0	3·7
16	Thursday	3	4	−0·3	9	27	4·1	15	47	−0·4	21	52	3·6
17	Friday	3	58	−0·3	10	20	4·0	16	43	−0·4	22	44	3·5
18	Saturday	4	50	−0·3	11	10	3·8	17	32	−0·4	23	33	3·3
19	Sunday	5	39	−0·2	11	59	3·6	18	21	−0·2	..		..
20	Monday	0	26	3·1	6	32	0·0	12	52	3·3	19	15	0·0
21	Tuesday	1	16	2·9	7	26	0·1	13	43	3·1	20	5	0·2
22	Wednesday	2	5	2·8	8	17	0·3	14	37	3·0	20	56	0·5
23	Thursday	2	59	2·8	9	11	0·5	15	28	2·9	21	17	0·7
24	Friday	3	46	2·9	10	4	0·8	16	17	2·9	22	34	0·9
25	Saturday	4	33	2·9	10	53	0·9	17	9	2·9	23	20	1·1

Wellington Tide-tables for 1914—*continued.*

Date.	Day.	H. m.	Ft.	H. m.	Ft.	H. m.	Ft.	H. m.	Ft.
	April—continued.								
26	Sunday	5 19	3·0	11 37	1·0	17 53	2·9	..	..
27	Monday	0 0	1·2	6 3	3·2	12 17	1·0	18 33	2·9
28	Tuesday	0 34	1·2	6 43	3·3	12 55	1·0	19 8	3·0
29	Wednesday	1 8	1·1	7 20	3·4	13 35	0·9	19 46	3·0
30	Thursday	1 47	0·9	8 0	3·5	14 19	0·7	20 26	3·1
	May, 1914.								
1	Friday	2 26	0·7	8 47	3·6	15 1	0·5	21 10	3·2
2	Saturday	3 10	0·4	9 31	3·6	15 46	0·3	21 56	3·2
3	Sunday	3 58	0·2	10 19	3·6	16 33	0·1	22 41	3·2
4	Monday	4 47	0·0	11 6	3·6	17 17	0·0	23 30	3·3
5	Tuesday	5 36	−0·1	11 59	3·6	18 9	−0·1	..	..
6	Wednesday	0 25	3·4	6 35	−0·2	12 55	3·6	19 3	−0·1
7	Thursday	1 21	3·5	7 35	−0·2	13 52	3·6	19 59	−0·1
8	Friday	2 18	3·6	8 36	−0·2	14 49	3·6	20 56	−0·1
9	Saturday	3 16	3·8	9 34	−0·1	15 46	3·7	21 56	0·0
10	Sunday	4 15	3·9	10 36	−0·1	16 49	3·8	22 56	0·0
11	Monday	5 16	4·1	11 37	−0·1	17 48	3·8	23 56	0·0
12	Tuesday	6 16	4·1	12 37	−0·1	18 46	3·8	..	..
13	Wednesday	0 52	0·0	7 13	4·2	13 34	−0·2	19 41	3·8
14	Thursday	1 47	0·0	8 9	4·1	14 31	−0·2	20 35	3·7
15	Friday	2 41	0·0	9 4	4·1	15 26	−0·2	21 26	3·5
16	Saturday	3 33	−0·1	9 54	3·9	16 19	−0·2	22 18	3·4
17	Sunday	4 25	−0·1	10 46	3·7	17 10	−0·1	23 9	3·2
18	Monday	5 16	0·0	11 39	3·5	17 58	0·0	..	..
19	Tuesday	0 1	3·1	6 8	0·1	12 30	3·3	18 46	0·2
20	Wednesday	0 49	3·0	6 59	0·2	13 18	3·1	19 34	0·4
21	Thursday	1 37	3·0	7 50	0·4	14 10	3·0	20 21	0·5
22	Friday	2 25	3·0	8 41	0·5	14 56	2·9	21 5	0·8
23	Saturday	3 10	3·1	9 29	0·8	15 43	2·9	21 52	1·0
24	Sunday	3 52	3·2	10 18	0·9	16 25	2·9	22 34	1·1
25	Monday	4 35	3·3	10 59	1·0	17 7	3·0	23 14	1·2
26	Tuesday	5 19	3·4	11 41	1·0	17 50	3·1	23 52	1·2
27	Wednesday	6 5	3·5	12 22	1·0	18 34	3·1	..	..
28	Thursday	0 31	1·0	6 50	3·6	13 6	0·9	19 15	3·2
29	Friday	1 16	0·9	7 35	3·6	13 49	0·7	19 58	3·2
30	Saturday	2 1	0·6	8 19	3·6	14 37	0·5	20 46	3·2
31	Sunday	2 50	0·4	9 9	3·6	15 25	0·3	21 36	3·3
	June, 1914.								
1	Monday	3 42	0·2	10 2	3·6	16 14	0·1	22 26	3·3
2	Tuesday	4 34	0·0	10 53	3·6	17 4	−0·1	23 16	3·4
3	Wednesday	5 26	−0·1	11 43	3·6	17 54	−0·1	..	..
4	Thursday	0 9	3·5	6 22	−0·2	12 38	3·6	18 46	−0·2
5	Friday	1 4	3·6	7 19	−0·2	13 34	3·6	19 40	−0·1
6	Saturday	1 58	3·7	8 17	−0·2	14 30	3·6	20 37	−0·1
7	Sunday	2 55	3·9	9 16	−0·1	15 25	3·7	21 34	0·0
8	Monday	3 53	4·0	10 14	−0·1	16 23	3·7	22 31	0·1
9	Tuesday	4 51	4·1	11 12	0·0	17 20	3·7	23 25	0·2
10	Wednesday	5 50	4·1	12 10	−0·1	18 19	3·6	..	..
11	Thursday	0 20	0·2	6 46	4·0	13 8	−0·1	19 13	3·6
12	Friday	1 16	0·2	7 41	3·9	14 5	0·1	20 8	3·5
13	Saturday	2 14	0·1	8 35	3·8	14 59	0·1	21 2	3·4
14	Sunday	3 10	0·1	9 31	3·7	15 52	0·1	21 55	3·3
15	Monday	4 2	0·1	10 22	3·5	16 41	0·1	22 43	3·2
16	Tuesday	4 51	0·1	11 11	3·3	17 28	0·2	23 29	3·2
17	Wednesday	5 40	0·2	11 58	3·1	18 11	0·3	..	..
18	Thursday	0 17	3·2	6 28	0·3	12 45	3·1	18 55	0·4
19	Friday	1 1	3·2	7 16	0·4	13 31	3·0	19 37	0·6
20	Saturday	1 44	3·2	8 1	0·6	14 14	3·0	20 18	0·8

WELLINGTON TIDE-TABLES FOR 1914—*continued.*

Date.	Day.	H.	m.	Ft.	H.	m.	Ft.	H.	m.	Ft.	H.	m.	Ft.
	June—continued.												
21	Sunday	2	27	3·3	8	46	0·7	14	56	3·0	20	58	0·9
22	Monday	3	10	3·4	9	28	0·8	15	38	3·0	21	38	1·0
23	Tuesday	3	52	3·5	10	12	0·9	16	22	3·1	22	20	1·1
24	Wednesday	4	39	3·5	10	58	0·9	17	8	3·1	23	8	1·0
25	Thursday	5	27	3·6	11	48	0·9	17	58	3·2	23	59	0·9
26	Friday	6	19	3·6	12	36	0·8	18	49	3·2	..		..
27	Saturday	0	52	0·7	7	11	3·6	13	26	0·6	19	39	3·3
28	Sunday	1	44	0·5	8	3	3·6	14	16	0·4	20	29	3·4
29	Monday	2	36	0·3	8	55	3·6	15	7	0·3	21	21	3·4
30	Tuesday	3	32	0·1	9	46	3·6	15	58	0·1	22	12	3·5
	July, 1914.												
1	Wednesday	4	28	0·0	10	41	3·6	16	52	−0·2	23	6	3·6
2	Thursday	5	21	−0·1	11	34	3·6	17	42	−0·2	23	57	3·7
3	Friday	6	14	−0·3	12	26	3·6	18	31	−0·2	..		..
4	Saturday	0	50	3·8	7	8	−0·3	13	19	3·5	19	22	−0·1
5	Sunday	1	44	3·8	8	3	−0·2	14	11	3·5	20	16	−0·1
6	Monday	2	39	3·9	8	57	−0·1	15	4	3·5	21	9	0·0
7	Tuesday	3	31	3·8	9	53	0·0	15	59	3·4	22	4	0·2
8	Wednesday	4	27	3·8	10	52	0·1	16	55	3·4	23	1	0·3
9	Thursday	5	24	3·8	11	49	0·2	17	52	3·4	..		..
10	Friday	0	1	0·3	6	19	3·8	12	44	0·3	18	49	3·4
11	Saturday	0	56	0·4	7	19	3·7	13	40	0·3	19	43	3·3
12	Sunday	1	51	0·3	8	14	3·6	14	35	0·3	20	35	3·3
13	Monday	2	45	0·3	9	5	3·4	15	24	0·3	21	25	3·3
14	Tuesday	3	35	0·3	9	53	3·3	16	9	0·4	22	11	3·2
15	Wednesday	4	25	0·3	10	41	3·2	16	53	0·4	22	56	3·3
16	Thursday	5	11	0·3	11	23	3·1	17	33	0·4	23	38	3·3
17	Friday	5	53	0·3	12	7	3·1	18	11	0·5	..		..
18	Saturday	0	19	3·3	6	35	0·4	12	49	3·0	18	50	0·5
19	Sunday	1	1	3·4	7	16	0·5	13	28	3·0	19	29	0·6
20	Monday	1	45	3·4	7	58	0·6	14	11	3·1	20	10	0·7
21	Tuesday	2	29	3·5	8	44	0·6	14	55	3·1	20	54	0·6
22	Wednesday	3	17	3·6	9	31	0·7	15	44	3·1	21	43	0·7
23	Thursday	4	6	3·6	10	22	0·7	16	33	3·2	22	38	0·7
24	Friday	4	57	3·6	11	14	0·6	17	28	3·3	23	32	0·6
25	Saturday	5	52	3·6	12	8	0·5	18	21	3·3	..		..
26	Sunday	0	31	0·5	6	49	3·6	13	2	0·4	19	18	3·4
27	Monday	1	29	0·3	7	46	3·6	13	58	0·2	20	14	3·5
28	Tuesday	2	28	0·1	8	41	3·6	14	51	0·1	21	7	3·6
29	Wednesday	3	22	−0·1	9	34	3·6	15	42	−0·1	22	0	3·7
30	Thursday	4	17	−0·2	10	26	3·6	16	34	−0·2	22	50	3·8
31	Friday	5	8	−0·3	11	17	3·5	17	23	−0·2	23	41	3·8
	August, 1914.												
1	Saturday	5	59	−0·4	12	7	3·5	18	12	−0·3	..		..
2	Sunday	0	31	3·8	6	52	−0·4	13	0	3·4	19	3	−0·2
3	Monday	1	25	3·7	7	46	−0·3	13	52	3·3	19	54	−0·1
4	Tuesday	2	17	3·7	8	38	−0·1	14	47	3·3	20	46	0·0
5	Wednesday	3	11	3·6	9	34	0·0	15	38	3·2	21	41	0·2
6	Thursday	4	5	3·5	10	31	0·2	16	35	3·1	22	40	0·4
7	Friday	5	5	3·4	11	29	0·4	17	33	3·1	23	38	0·4
8	Saturday	6	2	3·4	12	22	0·5	18	27	3·1	..		..

Wellington Tide-tables for 1914—*continued.*

Date.	Day.	H.	m.	Ft.	H.	m.	Ft.	H.	m.	Ft.	H.	m.	Ft.
	August—continued.												
9	Sunday	0	35	0·5	6	58	3·3	13	18	0·5	19	19	3·1
10	Monday	1	29	0·5	7	49	3·3	14	7	0·6	20	9	3·1
11	Tuesday	2	19	0·5	8	40	3·2	14	54	0·6	20	56	3·2
12	Wednesday	3	8	0·5	9	23	3·1	15	35	0·5	21	39	3·2
13	Thursday	3	55	0·4	10	5	3·1	16	14	0·5	22	20	3·3
14	Friday	4	35	0·4	10	44	3·1	16	50	0·5	23	0	3·3
15	Saturday	5	15	0·4	11	25	3·0	17	28	0·4	23	38	3·4
16	Sunday	5	52	0·3	12	2	3·0	18	7	0·4	..		..
17	Monday	0	18	3·5	6	33	0·3	12	43	3·0	18	45	0·4
18	Tuesday	1	5	3·5	7	18	0·3	13	30	3·1	19	32	0·4
19	Wednesday	1	51	3·5	8	5	0·3	14	16	3·1	20	21	0·4
20	Thursday	2	40	3·5	8	55	0·4	15	5	3·2	21	14	0·4
21	Friday	3	32	3·6	9	49	0·4	16	0	3·2	22	11	0·4
22	Saturday	4	31	3·5	10	47	0·3	17	1	3·3	23	14	0·3
23	Sunday	5	32	3·6	11	47	0·3	18	1	3·4	..		..
24	Monday	0	14	0·2	6	31	3·6	12	40	0·2	18	59	3·6
25	Tuesday	1	13	0·0	7	27	3·7	13	36	0·1	19	55	3·7
26	Wednesday	2	11	−0·1	8	23	3·7	14	30	−0·1	20	50	3·8
27	Thursday	3	6	−0·3	9	15	3·7	15	23	−0·2	21	41	3·9
28	Friday	4	1	−0·4	10	8	3·6	16	14	−0·1	22	32	3·9
29	Saturday	4	53	−0·5	11	1	3·5	17	5	−0·4	23	25	3·9
30	Sunday	5	44	−0·5	11	52	3·4	17	55	−0·4	..		..
31	Monday	0	16	3·8	6	36	−0·5	12	42	3·3	18	44	−0·3
	September, 1914.												
1	Tuesday	1	8	3·7	7	28	−0·3	13	32	3·1	19	37	−0·1
2	Wednesday	1	59	3·5	8	21	−0·1	14	25	3·0	20	30	..
3	Thursday	2	53	3·4	9	17	0·1	15	18	3·0	21	25	0·2
4	Friday	3	48	3·2	10	10	0·3	16	11	2·9	22	21	0·4
5	Saturday	4	45	3·1	11	6	0·5	17	8	2·9	23	22	0·5
6	Sunday	5	41	3·1	12	5	0·6	18	4	2·9	..		..
7	Monday	0	18	0·6	6	36	3·0	12	55	0·7	18	56	3·0
8	Tuesday	1	10	0·7	7	26	3·0	13	39	0·7	19	39	3·1
9	Wednesday	1	58	0·6	8	10	3·0	14	19	0·8	20	22	3·1
10	Thursday	2	39	0·6	8	53	3·0	14	55	0·7	21	2	3·2
11	Friday	3	17	0·5	9	30	3·0	15	31	0·6	21	40	3·3
12	Saturday	3	55	0·5	10	6	3·0	16	4	0·5	22	19	3·4
13	Sunday	4	32	0·4	10	43	3·0	16	43	0·4	23	0	3·4
14	Monday	5	12	0·3	11	20	3·0	17	22	0·3	23	39	3·5
15	Tuesday	5	54	0·2	12	3	3·1	18	5	0·2	..		..
16	Wednesday	0	26	3·5	6	38	0·1	12	53	3·1	18	54	0·1
17	Thursday	1	19	3·5	7	29	0·2	13	43	3·2	19	49	0·1
18	Friday	2	12	3·5	8	25	0·1	14	38	3·3	20	48	0·1
19	Saturday	3	8	3·5	9	22	0·2	15	34	3·4	21	49	0·1
20	Sunday	4	7	3·6	10	18	0·2	16	34	3·5	22	51	0·1
21	Monday	5	8	3·6	11	17	0·1	17	35	3·6	23	54	0·0
22	Tuesday	6	8	3·7	12	16	0·0	18	35	3·8	..		..
23	Wednesday	0	53	−0·1	7	4	3·8	13	13	−0·1	19	31	3·9
24	Thursday	1	50	−0·3	7	59	3·8	14	7	−0·2	20	28	4·0
25	Friday	2	47	−0·4	8	56	3·7	15	2	−0·3	21	24	4·0
26	Saturday	3	42	−0·5	9	49	3·6	15	55	−0·4	22	16	4·0
27	Sunday	4	36	−0·5	10	39	3·5	16	46	−0·4	23	7	3·9
28	Monday	5	26	−0·5	11	32	3·4	17	35	−0·4	23	56	3·7
29	Tuesday	6	17	−0·4	12	23	3·2	18	26	−0·3	..		..
30	Wednesday	0	49	3·5	7	10	−0·3	13	14	3·2	19	18	−0·1
	October, 1914.												
1	Thursday	1	40	3·2	8	4	−0·1	14	5	2·9	20	13	0·1
2	Friday	2	34	3·2	8	56	0·2	15	2	2·9	21	11	0·3
3	Saturday	3	31	3·1	9	52	0·4	15	55	2·9	22	10	0·5

WELLINGTON TIDE-TABLES FOR 1914—*continued*

Date.	Day.	H.	m.	Ft.	H.	m.	Ft.	H.	m.	Ft.	H.	m.	Ft.
	October, 1914.—continued.												
4	Sunday	4	26	3·0	10	48	0·6	16	47	2·9	23	4	0·7
5	Monday	5	20	3·0	11	38	0·9	17	36	3·0	23	53	0·8
6	Tuesday	6	10	2·9	12	22	1·0	18	23	3·0	..		..
7	Wednesday	0	39	0·9	6	54	2·9	13	3	1·0	19	7	3·2
8	Thursday	1	20	0·9	7	38	2·9	13	38	1·0	19	48	3·3
9	Friday	2	1	0·8	8	15	2·9	14	11	0·9	20	23	3·3
10	Saturday	2	39	0·7	8	49	3·0	14	46	0·8	21	1	3·4
11	Sunday	3	17	0·6	9	25	3·0	15	23	0·6	21	42	3·4
12	Monday	3	56	0·4	10	4	3·0	16	5	0·4	22	26	3·5
13	Tuesday	4	36	0·3	10	48	3·1	16	47	0·2	23	11	3·5
14	Wednesday	5	18	0·1	11	34	3·1	17	34	0·1	..		..
15	Thursday	0	2	3·5	6	6	0·0	12	22	3·2	18	28	0·0
16	Friday	0	53	3·5	7	1	0·0	13	17	3·3	19	25	−0·1
17	Saturday	1	44	3·6	7	55	0·0	14	11	3·4	20	23	−0·1
18	Sunday	2	41	3·6	8	50	0·0	15	10	3·6	21	24	0·0
19	Monday	3	38	3·6	9	49	0·0	16	9	3·7	22	27	0·0
20	Tuesday	4	41	3·7	10	50	0·0	17	10	3·9	23	31	−0·1
21	Wednesday	5	40	3·8	11	50	0·0	18	10	4·1	..		..
22	Thursday	0	29	−0·2	6	40	3·8	12	47	−0·1	19	10	4·1
23	Friday	1	29	−0·3	7	38	3·8	13	43	−0·2	20	5	4·2
24	Saturday	2	23	−0·4	8	32	3·8	14	36	−0·3	20	59	4·1
25	Sunday	3	20	−0·4	9	26	3·7	15	31	−0·3	21	51	4·0
26	Monday	4	14	−0·4	10	17	3·5	16	23	−0·3	22	44	3·9
27	Tuesday	5	7	−0·4	11	10	3·4	17	14	−0·3	23	36	3·7
28	Wednesday	5	59	−0·4	12	1	3·2	18	7	−0·2	..		..
29	Thursday	0	28	3·4	6	53	−0·2	12	55	3·1	19	4	0·1
30	Friday	1	22	3·2	7	44	0·1	13	47	3·0	19	56	0·2
31	Saturday	2	18	3·1	8	34	0·3	14	38	2·9	20	53	0·4
	November, 1914.												
1	Sunday	3	8	2·9	9	26	0·5	15	30	2·8	21	49	0·5
2	Monday	3	58	2·8	10	19	0·5	16	17	2·8	22	38	0·5
3	Tuesday	4	48	2·7	11	2	0·7	17	5	2·8	23	27	0·6
4	Wednesday	5	37	2·7	11	45	0·8	17	50	2·9	..		..
5	Thursday	0	10	0·7	6	18	2·7	12	22	0·9	18	32	3·1
6	Friday	0	47	0·8	6	58	2·8	12	55	1·0	19	11	3·2
7	Saturday	1	23	0·9	7	36	2·9	13	30	1·0	19	46	3·4
8	Sunday	2	2	0·9	8	12	3·0	14	9	0·9	20	26	3·5
9	Monday	2	40	0·8	8	50	3·2	14	50	0·8	21	10	3·7
10	Tuesday	3	23	0·7	9	34	3·3	15	39	0·6	21	55	3·8
11	Wednesday	4	11	0·6	10	18	3·4	16	28	0·4	22	44	3·8
12	Thursday	4	56	0·4	11	5	3·5	17	16	0·2	23	35	3·7
13	Friday	5	44	0·2	11	58	3·5	18	11	0·1	..		..
14	Saturday	0	29	3·7	6	35	0·0	12	55	3·6	19	5	0·1
15	Sunday	1	24	3·6	7	29	0·0	13	52	3·6	20	4	−0·1
16	Monday	2	21	3·7	8	26	−0·1	14	47	3·7	21	5	−0·2
17	Tuesday	3	19	3·5	9	25	−0·2	15	45	3·7	22	6	−0·3
18	Wednesday	4	16	3·6	10	23	−0·2	16	44	3·8	23	7	−0·3
19	Thursday	5	14	3·5	11	22	−0·3	17	44	3·9	..		..
20	Friday	0	7	−0·4	6	13	3·6	12	19	−0·2	18	42	4·1
21	Saturday	1	4	−0·3	7	12	3·7	13	15	−0·2	19	39	4·1
22	Sunday	2	2	−0·3	8	7	3·7	14	12	−0·1	20	35	4·1
23	Monday	3	0	−0·2	9	0	3·7	15	7	−0·1	21	28	4·1
24	Tuesday	3	52	−0·1	9	53	3·7	16	2	0·0	22	22	4·0
25	Wednesday	4	46	0·0	10	48	3·6	16	57	0·1	23	16	3·9
26	Thursday	5	37	0·1	11	38	3·5	17	49	0·2	..		..
27	Friday	0	8	3·7	6	27	0·3	12	32	3·4	18	40	0·3
28	Saturday	1	1	3·5	7	17	0·4	13	21	3·3	19	32	0·4
29	Sunday	1	52	3·2	8	5	0·6	14	8	3·2	20	24	0·5
30	Monday	2	41	3·0	8	52	0·7	14	53	3·1	21	12	0·6

WELLINGTON TIDE-TABLES FOR 1914—*continued*.

December, 1914.

Date.	Day.	H.	m.	Ft.	H.	m.	Ft.	H.	m.	Ft.	H.	m.	Ft.
1	Tuesday	3	29	2·9	9	35	0·8	15	40	3·1	21	59	0·7
2	Wednesday	4	13	2·8	10	17	0·9	16	22	3·0	22	46	0·8
3	Thursday	4	52	2·7	10	59	1·0	17	4	3·1	23	27	0·8
4	Friday	5	35	2·7	11	38	1·0	17	50	3·2	..		..
5	Saturday	0	8	0·9	6	18	2·8	12	17	1·0	18	33	3·3
6	Sunday	0	49	0·9	6	57	2·9	12	55	0·9	19	16	3·4
7	Monday	1	32	0·8	7	41	3·0	13	40	0·8	19	59	3·5
8	Tuesday	2	15	0·7	8	24	3·2	14	28	0·7	20	48	3·6
9	Wednesday	2	59	0·6	9	13	3·3	15	19	0·6	21	37	3·7
10	Thursday	3	48	0·5	10	1	3·5	16	10	0·4	22	26	3·7
11	Friday	4	35	0·4	10	51	3·6	17	2	0·2	23	16	3·8
12	Saturday	5	23	0·2	11	42	3·7	17	57	0·1	..		..
13	Sunday	0	9	3·7	6	15	0·1	12	34	3·8	18	50	0·0
14	Monday	1	4	3·7	7	9	0·0	13	31	3·8	17	47	—0·2
15	Tuesday	1	59	3·6	8	4	—0·1	14	26	3·9	20	44	—0·2
16	Wednesday	2	53	3·6	8	59	—0·2	15	21	3·9	21	40	—0·3
17	Thursday	3	50	3·7	9	56	—0·2	16	19	3·9	22	40	—0·3
18	Friday	4	49	3·5	10	54	—0·2	17	18	3·9	23	40	—0·3
19	Saturday	5	48	3·5	11	52	—0·2	18	16	3·9	..		..
20	Sunday	0	38	—0·2	6	47	3·5	12	50	—0·1	19	13	3·9
21	Monday	1	35	—0·2	7	40	3·5	13	49	0·0	20	9	3·9
22	Tuesday	2	35	—0·1	8	35	3·5	14	46	0·0	21	7	3·9
23	Wednesday	3	29	0·0	9	30	3·6	15	42	0·1	22	2	3·8
24	Thursday	4	22	0·2	10	23	3·6	16	37	0·2	22	52	3·7
25	Friday	5	12	0·3	11	14	3·6	17	28	0·3	23	43	3·6
26	Saturday	5	56	0·4	12	3	3·5	18	18	0·4	..		..
27	Sunday	0	31	3·4	6	41	0·6	12	49	3·4	19	5	0·5
28	Monday	1	18	3·3	7	23	0·6	13	34	3·4	19	50	0·6
29	Tuesday	2	3	3·1	8	7	0·8	14	17	3·3	20	33	0·6
30	Wednesday	2	46	3·0	8	49	0·8	14	59	3·3	21	17	0·7
31	Thursday	3	22	2·8	9	27	0·9	15	40	3·2	21	58	0·8

AUCKLAND TIDE-TABLES FOR 1914.

The heights, in feet and tenths, are measured from a point 4·737 ft. above the dock-sill, and approximately 4·5 ft. below mean sea-level.

January, 1914.

1	Thursday	4	0	0·9	10	34	8·1	16	13	0·8	22	50	8·5
2	Friday	4	46	0·9	11	8	7·8	17	0	1·2	23	30	8·2
3	Saturday	5	30	1·1	11	47	7·6	17	44	1·5	..		..
4	Sunday	0	9	7·9	6	16	1·2	12	26	7·4	18	29	1·8
5	Monday	0	48	7·7	7	2	1·4	13	10	7·2	19	21	1·9
6	Tuesday	1	29	7·5	7	50	1·5	13	55	7·2	20	14	2·0
7	Wednesday	2	16	7·3	8	42	1·4	14	46	7·2	21	5	1·9
8	Thursday	3	11	7·3	9	29	1·2	15	43	7·5	21	56	1·7
9	Friday	4	7	7·5	10	20	0·9	16	38	7·8	22	48	1·4
10	Saturday	5	2	7·7	11	13	0·7	17	35	8·2	23	39	1·0
11	Sunday	6	0	8·1	12	2	0·4	18	30	8·6	..		..
12	Monday	0	29	0·7	6	56	8·4	12	48	0·0	19	21	9·0
13	Tuesday	1	19	0·2	7	47	8·7	13	35	—0·2	20	12	9·3
14	Wednesday	2	6	—0·1	8	38	8·9	14	24	—0·3	20	58	9·5
15	Thursday	2	52	—0·2	9	26	9·0	15	10	—0·3	21	46	9·5
16	Friday	3	41	—0·2	10	16	9·0	15	58	—0·1	22	32	9·5
17	Saturday	4	32	0·0	11	1	8·9	16	53	0·3	23	17	9·2

AUCKLAND TIDE-TABLES FOR 1914—*continued.*

Date.	Day.	H.	m.	Ft.	H.	m.	Ft.	H.	m.	Ft.	H.	m.	Ft.
	January—continued.												
18	Sunday	5	26	0·2	11	51	8·7	17	48	0·6	..		..
19	Monday	0	7	8·9	6	25	0·4	12	41	8·4	18	49	0·9
20	Tuesday	0	58	8·5	7	25	0·6	13	38	8·1	19	51	1·1
21	Wednesday	1	56	8·1	8	26	0·7	14	42	7·9	20	55	1·2
22	Thursday	2	59	7·8	9	28	0·7	15	49	7·9	21	57	1·1
23	Friday	4	10	7·7	10	25	0·6	16	58	8·1	22	53	1·0
24	Saturday	5	19	7·7	11	19	0·5	17	59	8·3	23	47	0·8
25	Sunday	6	19	7·9	12	8	0·4	18	55	8·5	..		..
26	Monday	0	39	0·6	7	10	8·1	12	56	0·3	19	41	8·7
27	Tuesday	1	25	0·3	7	56	8·2	13	44	0·3	20	26	8·8
28	Wednesday	2	10	0·3	8	43	8·2	14	26	0·4	21	5	8·7
29	Thursday	2	49	0·3	9	23	8·1	15	6	0·6	21	43	8·6
30	Friday	3	29	0·5	10	0	8·0	15	44	0·9	22	20	8·4
31	Saturday	4	9	0·7	10	37	7·9	16	20	1·2	22	55	8·2
	February, 1914.												
1	Sunday	4	44	1·0	11	13	7·7	16	56	1·6	23	29	7·9
2	Monday	5	25	1·3	11	49	7·6	17	38	1·9	..		..
3	Tuesday	0	5	7·7	6	10	1·5	12	26	7·5	18	23	2·1
4	Wednesday	0	43	7·6	6	55	1·6	13	8	7·5	19	14	2·2
5	Thursday	1	29	7·5	7	49	1·6	14	1	7·5	20	18	2·1
6	Friday	2	21	7·4	8	45	1·5	14	58	7·6	21	18	1·8
7	Saturday	3	26	7·5	9	44	1·2	16	2	7·9	22	19	1·4
8	Sunday	4	30	7·7	10	39	0·8	17	2	8·3	23	13	0·9
9	Monday	5	30	8·1	11	32	0·3	18	1	8·7	..		..
10	Tuesday	0	3	0·4	6	30	8·5	12	23	−0·1	18	55	9·2
11	Wednesday	0	55	−0·2	7	25	8·9	13	14	−0·4	19	44	9·6
12	Thursday	1	43	−0·6	8	16	9·2	14	1	−0·7	20	34	9·8
13	Friday	2	29	−0·8	9	3	9·4	14	48	−0·6	21	21	9·9
14	Saturday	3	20	−0·7	9	53	9·5	15	37	−0·4	22	8	9·8
15	Sunday	4	8	−0·5	10	40	9·3	16	29	0·0	22	58	9·5
16	Monday	5	1	−0·1	11	31	9·1	17	25	0·5	23	47	9·1
17	Tuesday	6	0	0·3	12	23	8·7	18	29	0·9	..		..
18	Wednesday	0	37	8·6	7	2	0·7	13	19	8·4	19	32	1·3
19	Thursday	1	37	8·0	8	5	0·9	14	19	8·0	20	38	1·4
20	Friday	2	40	7·7	9	9	1·0	15	26	7·9	21	44	1·4
21	Saturday	3	51	7·5	10	9	1·0	16	35	8·0	22	41	1·1
22	Sunday	4	59	7·6	11	2	0·8	17	37	8·2	23	32	0·8
23	Monday	5	59	7·7	11	53	0·6	18	34	8·5	..		..
24	Tuesday	0	20	0·5	6	55	7·9	12	41	0·5	19	22	8·6
25	Wednesday	1	9	0·4	7	41	8·1	13	23	0·4	20	5	8·6
26	Thursday	1	47	0·3	8	20	8·1	13	58	0·5	20	40	8·6
27	Friday	2	25	0·3	8	53	8·1	14	35	0·7	21	13	8·5
28	Saturday	2	58	0·4	9	29	8·0	15	9	1·0	21	46	8·3
	March, 1914.												
1	Sunday	3	32	0·7	10	4	8·0	15	40	1·3	22	19	8·1
2	Monday	4	4	1·0	10	35	7·9	16	16	1·6	22	55	8·0
3	Tuesday	4	40	1·3	11	16	7·9	16	52	1·9	23	33	7·9
4	Wednesday	5	15	1·5	11	53	7·8	17	36	2·2	..		..
5	Thursday	0	13	7·7	6	6	1·7	12	34	7·7	18	35	2·3
6	Friday	0	55	7·5	7	8	1·8	13	23	7·7	19	42	2·2
7	Saturday	1	44	7·4	8	10	1·6	14	21	7·8	20	48	1·9
8	Sunday	2	50	7·5	9	10	1·3	15	25	8·0	21	48	1·4
9	Monday	3	56	7·7	10	9	0·9	16	31	8·4	22	46	0·7
10	Tuesday	5	5	8·1	11	6	0·3	17	32	8·8	23	40	0·1
11	Wednesday	6	5	8·6	11	59	−0·2	18	26	9·3	..		..
12	Thursday	0	32	−0·5	7	0	9·0	12	50	−0·5	19	20	9·7
13	Friday	1	20	−0·9	7	52	9·4	13	40	−0·8	20	10	10.0
14	Saturday	2	8	−1·1	8	42	9·7	14	28	−0·8	20	58	10·0

AUCKLAND TIDE-TABLES FOR 1914—*continued.*

Date.	Day.	H.	m.	Ft.	H.	m.	Ft.	H.	m.	Ft.	H.	m.	Ft.
	March—continued.												
15	Sunday	2	54	−1·0	9	31	9·8	15	16	−0·5	21	45	9·9
16	Monday	3	44	−0·7	10	19	9·6	16	7	−0·1	22	33	9·5
17	Tuesday	4	37	−0·3	11	10	9·3	17	5	0·4	23	25	9·0
18	Wednesday	5	33	0·2	12	2	8·9	18	7	0·9	. .		. .
19	Thursday	0	18	8·5	6	38	0·7	12	58	8·4	19	10	1·1
20	Friday	1	16	7·9	7	46	1·0	14	1	8·1	20	24	1·4
21	Saturday	2	20	7·5	8	52	1·1	15	8	7·9	21	29	1·3
22	Sunday	3	32	7·4	9	52	1·1	16	16	8·0	22	22	1·1
23	Monday	4	38	7·4	10	40	0·9	17	11	8·1	23	9	0·8
24	Tuesday	5	37	7·6	11	29	0·9	18	6	8·2	23	58	0·5
25	Wednesday	6	27	7·7	12	16	0·7	18	51	8·4	. .		. .
26	Thursday	0	40	0·3	7	12	8·0	12	57	0·6	19	34	8·5
27	Friday	1	17	0·3	7	52	8·1	13	32	0·7	20	6	8·5
28	Saturday	1	53	0·3	8	27	8·2	14	6	0·9	20	40	8·4
29	Sunday	2	25	0·5	9	1	8·2	14	38	1·1	21	15	8·3
30	Monday	2	55	0·7	9	33	8·1	15	5	1·4	21	47	8·2
31	Tuesday	3	24	1·0	10	9	8·1	15	40	1·7	22	23	8·0
	April, 1914.												
1	Wednesday	3	57	1·2	10	47	8·1	16	16	1·9	23	1	7·9
2	Thursday	4	37	1·5	11	25	8·1	17	2	2·1	23	46	7·8
3	Friday	5	32	1·7	12	16	8·0	17	59	2·3	. .		. .
4	Saturday	0	34	7·6	6	36	1·7	12	58	8·0	19	10	2·1
5	Sunday	1	26	7·5	7	43	1·6	13	55	8·0	20	22	1·8
6	Monday	2	30	7·5	8	47	1·3	14	59	8·1	21	26	1·2
7	Tuesday	3	35	7·8	9	47	0·8	16	2	8·4	22	23	0·6
8	Wednesday	4	41	8·1	10	43	0·3	17	1	8·8	23	17	−0·1
9	Thursday	5	39	8·6	11	37	−0·1	17	59	9·3	. .		. .
10	Friday	0	8	−0·6	6	34	9·1	12	27	−0·5	18	52	9·6
11	Saturday	0	56	−1·0	7	26	9·5	13	16	−0·7	19	43	9·9
12	Sunday	1	44	−1·1	8	17	9·7	14	6	−0·6	20	34	9·9
13	Monday	2	32	−1·0	9	9	9·8	14	54	−0·3	21	25	9·8
14	Tuesday	3	21	−0·6	10	1	9·8	15	47	0·1	22	14	9·6
15	Wednesday	4	13	0·0	10	48	9·6	16	44	0·7	23	6	9·1
16	Thursday	5	10	0·5	11	40	9·1	17	44	1·1	. .		. .
17	Friday	0	0	8·5	6	13	0·9	12	35	8·7	18	50	1·3
18	Saturday	0	55	8·0	7	19	1·2	13	31	8·3	19	59	1·4
19	Sunday	1	56	7·6	8	26	1·3	14	34	8·0	21	2	1·3
20	Monday	2	59	7·4	9	24	1·3	15	38	7·9	21	51	1·0
21	Tuesday	4	7	7·4	10	16	1·1	16	40	8·0	22	41	0·8
22	Wednesday	5	7	7·5	11	2	1·0	17	28	8·0	23	23	0·6
23	Thursday	5	56	7·7	11	43	0·9	18	17	8·1	. .		. .
24	Friday	0	7	0·5	6	41	7·9	12	22	0·9	18	56	8·2
25	Saturday	0	46	0·4	7	16	8·0	12	59	1·0	19	31	8·3
26	Sunday	1	20	0·5	7	53	8·2	13	35	1·1	20	7	8·3
27	Monday	1	53	0·6	8	29	8·3	14	11	1·2	20	43	8·3
28	Tuesday	2	26	0·7	9	7	8·4	14	43	1·4	21	21	8·2
29	Wednesday	3	0	0·9	9	45	8·4	15	19	1·6	22	2	8·1
30	Thursday	3	36	1·1	10	23	8·4	16	1	1·8	22	37	8·1
	May, 1914.												
1	Friday	4	17	1·4	11	4	8·3	16	51	1·9	23	28	7·9
2	Saturday	5	11	1·6	11	50	8·3	17	46	2·0	. .		. .
3	Sunday	0	13	7·8	6	10	1·7	12	38	8·3	18	51	1·9
4	Monday	1	6	7·7	7	15	1·6	13	30	8·3	19	57	1·6
5	Tuesday	2	5	7·8	8	20	1·4	14	29	8·4	21	2	1·1
6	Wednesday	3	10	7·9	9	22	1·0	15	33	8·5	21	58	0·5
7	Thursday	4	14	8·2	10	19	0·5	16	35	8·8	22	51	0·0
8	Friday	5	13	8·6	11	13	0·1	17	32	9·0	23	44	−0·5
9	Saturday	6	11	8·9	12	5	−0·2	18	28	9·3	. .		. .

AUCKLAND TIDE-TABLES FOR 1914—*continued.*

Date	Day.	H.	m.	Ft.	H.	m.	Ft.	H.	m.	Ft.	H.	m.	Ft.
	May—continued.												
10	Sunday	0	35	−0·7	7	5	9·3	12	56	−0·4	19	21	9·5
11	Monday	1	21	−0·9	7	57	9·6	13	47	−0·3	20	13	9·5
12	Tuesday	2	10	−0·7	8	49	9·7	14	35	−0·1	21	5	9·4
13	Wednesday	3	1	−0·4	9	41	9·6	15	28	0·2	21	56	9·2
14	Thursday	3	52	0·0	10	28	9·4	16	23	0·6	22	47	8·9
15	Friday	4	47	0·6	11	22	9·2	17	22	1·0	23	38	8·5
16	Saturday	5	46	1·0	12	12	8·8	18	27	1·2	..		..
17	Sunday	0	30	8·1	6	50	1·3	13	3	8·5	19	28	1·3
18	Monday	1	27	7·7	7	50	1·5	13	59	8·1	20	24	1·3
19	Tuesday	2	23	7·4	8	46	1·5	14	53	7·9	21	19	1·2
20	Wednesday	3	21	7·3	9	36	1·5	15	50	7·7	22	6	1·0
21	Thursday	4	15	7·3	10	24	1·4	16	41	7·7	22	47	0·8
22	Friday	5	8	7·5	11	4	1·2	17	31	7·8	23	28	0·7
23	Saturday	5	50	7·6	11	46	1·1	18	13	7·9	..		..
24	Sunday	0	5	0·5	6	40	7·9	12	27	0·9	18	56	8·0
25	Monday	0	44	0·5	7	22	8·1	13	7	1·0	19	37	8·1
26	Tuesday	1	26	0·5	8	0	8·2	13	43	1·0	20	17	8·2
27	Wednesday	1	59	0·6	8	39	8·5	14	21	1·1	20	59	8·3
28	Thursday	2	38	0·7	9	22	8·6	15	2	1·2	21	44	8·3
29	Friday	3	16	0·9	10	5	8·7	15	46	1·4	22	28	8·3
30	Saturday	4	4	1·1	10	49	8·7	16	37	1·5	23	14	8·2
31	Sunday	4	51	1·3	11	32	8·7	17	35	1·6	..		..
	June, 1914.												
1	Monday	0	0	8·1	5	53	1·4	12	17	8·6	18	34	1·5
2	Tuesday	0	51	8·0	6	54	1·5	13	10	8·5	19	35	1·3
3	Wednesday	1	45	8·0	7	59	1·3	14	5	8·4	20	37	0·9
4	Thursday	2	47	8·0	8	58	1·1	15	5	8·4	21	34	0·6
5	Friday	3	48	8·1	9	59	0·8	16	9	8·5	22	28	0·2
6	Saturday	4	51	8·4	10	52	0·4	17	8	8·6	23	20	−0·1
7	Sunday	5	51	8·7	11	46	0·2	18	8	8·8	..		..
8	Monday	0	12	−0·4	6	47	9·1	12	39	0·1	19	4	8·9
9	Tuesday	1	4	−0·4	7	41	9·3	13	29	0·0	19	59	9·1
10	Wednesday	1	53	−0·3	8	32	9·5	14	21	0·0	20	49	9·0
11	Thursday	2	42	−0·1	9	22	9·5	15	11	0·3	21	41	8·9
12	Friday	3	31	0·2	10	11	9·3	16	2	0·6	22	29	8·7
13	Saturday	4	22	0·6	10	59	9·1	16	57	0·8	23	16	8·4
14	Sunday	5	16	1·0	11	43	8·8	17	51	1·1	..		..
15	Monday	0	4	8·2	6	11	1·4	12	29	8·5	18	46	1·3
16	Tuesday	0	54	7·8	7	8	1·7	13	15	8·1	19	40	1·4
17	Wednesday	1	41	7·4	8	1	1·7	14	5	7·7	20	29	1·3
18	Thursday	2	33	7·2	8	52	1·7	14	56	7·5	21	17	1·2
19	Friday	3	24	7·1	9	38	1·7	15	47	7·4	22	2	1·1
20	Saturday	4	19	7·3	10	23	1·6	16	40	7·5	22	45	0·9
21	Sunday	5	10	7·5	11	7	1·4	17	31	7·6	23	28	0·7
22	Monday	6	0	7·8	11	53	1·2	18	20	7·8	..		..
23	Tuesday	0	12	0·5	6	46	8·2	12	38	1·1	19	10	8·1
24	Wednesday	0	55	0·5	7	32	8·5	13	22	0·9	19	53	8·3
25	Thursday	1	39	0·5	8	16	8·9	14	0	0·9	20	40	8·5
26	Friday	2	20	0·5	9	1	9·1	14	46	0·8	21	25	8·6
27	Saturday	3	2	0·5	9	44	9·2	15	32	0·9	22	10	8·7
28	Sunday	3	49	0·7	10	28	9·2	16	22	0·8	22	56	8·6
29	Monday	4	40	0·9	11	13	9·1	17	14	0·9	23	43	8·5
30	Tuesday	5	38	1·1	12	0	8·9	18	10	1·0	..		..
	July, 1914.												
1	Wednesday	0	30	8·4	6	32	1·2	12	48	8·6	19	10	0·9
2	Thursday	1	25	8·1	7	38	1·3	13	43	8·4	20	13	0·8
3	Friday	2	24	8·0	8	39	1·2	14	43	8·2	21	11	0·7
4	Saturday	3	29	8·0	9	39	1·1	15	47	8·1	22	9	0·5

AUCKLAND TIDE-TABLES FOR 1914—*continued.*

Date.	Day.	H.	m.	Ft.	H.	m.	Ft.	H.	m.	Ft.	H.	m.	Ft.
July—continued.													
5	Sunday	4	32	8·2	10	35	0·9	16	54	8·2	23	4	0·4
6	Monday	5	35	8·5	11	31	0·7	17	56	8·4	23	59	0·2
7	Tuesday	6	36	8·8	12	23	0·5	18	56	8·6	..		..
8	Wednesday	0	49	0·1	7	31	9·1	13	16	0·3	19	49	8·7
9	Thursday	1	38	0·0	8	20	9·3	14	5	0·2	20	37	8·7
10	Friday	2	24	0·1	9	7	9·3	14	54	0·2	21	24	8·7
11	Saturday	3	10	0·3	9	50	9·2	15	38	0·2	22	6	8·5
12	Sunday	3	56	0·6	10	31	8·9	16	28	0·6	22	51	8·3
13	Monday	4	43	1·0	11	13	8·6	17	14	0·9	23	32	8·0
14	Tuesday	5	29	1·3	11	54	8·2	18	1	1·1	..		..
15	Wednesday	0	13	7·7	6	17	1·6	12	32	7·9	18	46	1·3
16	Thursday	0	55	7·4	7	7	1·9	13	17	7·6	19	35	1·5
17	Friday	1	40	7·2	7	58	2·1	14	2	7·3	20	26	1·5
18	Saturday	2	31	7·2	8	51	2·0	14	54	7·2	21	15	1·4
19	Sunday	3	25	7·3	9	41	1·9	15	47	7·3	22	4	1·3
20	Monday	4	22	7·6	10	32	1·7	16	48	7·5	22	54	1·0
21	Tuesday	5	19	7·9	11	28	1·4	17	45	7·8	23	41	0·8
22	Wednesday	6	13	8·4	12	11	0·9	18	39	8·2	..		..
23	Thursday	0	29	0·4	7	3	8·7	13	0	0·5	19	29	8·5
24	Friday	1	15	0·2	7	49	9·2	13	44	0·3	20	16	8·8
25	Saturday	2	0	0·0	8	37	9·4	14	30	0·1	21	3	9·0
26	Sunday	2	45	0·0	9	22	9·1	15	14	0·0	21	51	9·5
27	Monday	3	29	0·1	10	6	9·6	16	3	0·1	22	34	9·0
28	Tuesday	4	22	0·3	10	50	9·4	16	53	0·2	23	22	8·9
29	Wednesday	5	14	0·7	11	40	9·1	17	48	0·4	..		..
30	Thursday	0	13	8·6	6	14	1·0	12	27	8·7	18	49	0·7
31	Friday	1	7	8·4	7	15	1·3	13	22	8·3	19	49	0·9
August, 1914.													
1	Saturday	2	3	8·1	8	19	1·4	14	24	7·9	20	55	0·9
2	Sunday	3	12	8·0	9	26	1·3	15	32	7·8	21	54	0·8
3	Monday	4	20	8·1	10	25	1·1	16	41	7·8	22	49	0·7
4	Tuesday	5	23	8·3	11	19	0·9	17	45	7·9	23	42	0·5
5	Wednesday	6	23	8·6	12	14	0·6	18	43	8·2	..		..
6	Thursday	0	35	0·3	7	18	8·9	13	4	0·3	19	36	8·4
7	Friday	1	22	0·2	8	2	9·0	13	49	0·1	20	20	8·5
8	Saturday	2	6	0·2	8	44	9·0	14	32	0·1	21	4	8·5
9	Sunday	2	47	0·3	9	28	8·9	15	11	0·2	21	45	8·4
10	Monday	3	28	0·6	10	4	8·7	15	53	0·3	22	21	8·2
11	Tuesday	4	7	1·0	10	42	8·5	16	34	0·8	22	59	7·9
12	Wednesday	4	45	1·4	11	17	8·1	17	11	1·1	23	35	7·7
13	Thursday	5	26	1·8	11	54	7·8	17	54	1·4	..		..
14	Friday	0	15	7·5	6	13	2·1	12	31	7·5	18	37	1·6
15	Saturday	0	55	7·4	7	4	2·3	13	13	7·3	19	33	1·7
16	Sunday	1	43	7·3	8	2	2·3	14	6	7·2	20	27	1·7
17	Monday	2	38	7·4	9	1	2·1	15	5	7·2	21	27	1·4
18	Tuesday	3	41	7·6	9	59	1·7	16	8	7·4	22	19	1·1
19	Wednesday	4	41	8·0	10	53	1·2	17	8	7·7	23	13	0·7
20	Thursday	5	37	8·4	11	44	0·7	18	9	8·2	..		..
21	Friday	0	3	0·2	6	30	8·9	12	35	0·2	19	2	8·6
22	Saturday	0	52	−0·1	7	23	9·4	13	22	−0·4	19	52	9·1
23	Sunday	1	39	−0·4	8	9	9·7	14	8	−0·6	20	40	9·4
24	Monday	2	25	−0·5	8	57	9·9	14	55	−0·7	21	27	9·5
25	Tuesday	3	13	−0·3	9	43	9·8	15	40	−0·5	22	17	9·4
26	Wednesday	4	0	0·0	10	31	9·6	16	30	−0·2	23	2	9·2
27	Thursday	4	53	0·4	11	19	9·2	17	26	0·2	23	54	8·9
28	Friday	5	53	0·9	12	10	8·7	18	25	0·6	..		..
29	Saturday	0	48	8·5	6	58	1·3	13	4	8·3	19	30	0·9
30	Sunday	1	47	8·2	8	4	1·4	14	5	7·8	20	35	1·1
31	Monday	2	52	8·0	9	7	1·4	15	16	7·6	21	40	1·0

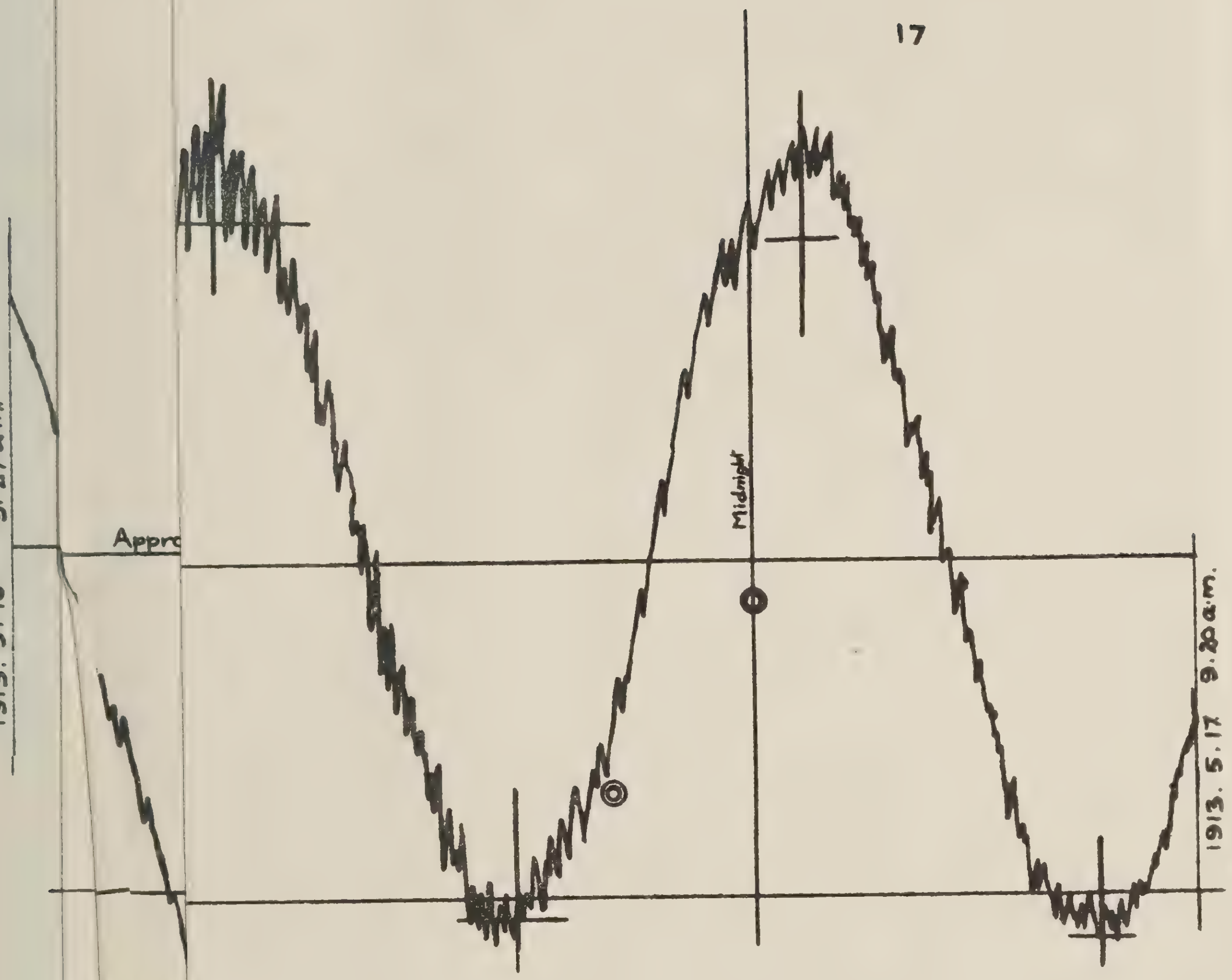
AUCKLAND TIDE-TABLES FOR 1914—*continued.*

Date.	Day.	H.	m.	Ft.	H.	m.	Ft.	H.	m.	Ft.	H.	m.	Ft.
	September, 1914.												
1	Tuesday	4	2	8·0	10	12	1·1	16	27	7·5	22	37	0·8
2	Wednesday	5	9	8·2	11	8	0·8	17	32	7·7	23	29	0·6
3	Thursday	6	7	8·4	11	59	0·4	18	26	8·0	..		..
4	Friday	0	19	0·4	6	55	8·6	12	42	0·2	19	17	8·2
5	Saturday	1	2	0·3	7	41	8·7	13	27	0·1	20	1	8·3
6	Sunday	1	43	0·3	8	19	8·7	14	7	0·0	20	41	8·3
7	Monday	2	22	0·5	8	58	8·7	14	43	0·2	21	18	8·2
8	Tuesday	2	57	0·8	9	34	8·4	15	17	0·5	21	51	8·1
9	Wednesday	3	30	1·2	10	7	8·2	15	52	0·8	22	28	8·0
10	Thursday	4	4	1·5	10	44	8·0	16	25	1·1	23	4	7·8
11	Friday	4	38	1·9	11	19	7·7	17	2	1·4	23	40	7·7
12	Saturday	5	23	2·1	11	56	7·5	17	50	1·7	..		..
13	Sunday	0	20	7·5	6	18	2·3	12	38	7·3	18	47	1·8
14	Monday	1	7	7·5	7	19	2·3	13	29	7·2	19	47	1·7
15	Tuesday	2	0	7·5	8	25	2·0	14	30	7·1	20	49	1·5
16	Wednesday	3	0	7·7	9	27	1·6	15	34	7·3	21	49	1·1
17	Thursday	4	5	8·1	10	23	0·9	16	39	7·7	22	44	0·5
18	Friday	5	5	8·5	11	17	0·3	17	38	8·2	23	36	0·0
19	Saturday	5	59	9·0	12	7	−0·3	18	34	8·8	..		..
20	Sunday	0	26	−0·4	6	52	9·4	12	57	−0·8	19	25	9·2
21	Monday	1	14	−0·7	7	42	9·8	13	42	−1·0	20	16	9·5
22	Tuesday	2	3	−0·7	8	30	9·9	14	30	−1·1	21	4	9·7
23	Wednesday	2	50	−0·6	9	19	9·9	15	16	−0·8	21	52	9·6
24	Thursday	3	39	−0·2	10	8	9·6	16	7	−0·4	22	43	9·4
25	Friday	4	33	0·3	10	59	9·2	17	2	0·1	23	36	9·1
26	Saturday	5	34	0·8	11	52	8·7	18	4	0·5	..		..
27	Sunday	0	30	8·7	6	38	1·1	12	47	8·1	19	13	0·9
28	Monday	1	29	8·2	7	50	1·3	13	50	7·7	20	22	1·0
29	Tuesday	2	32	8·0	8	59	1·1	14	59	7·4	21	24	0·9
30	Wednesday	3	38	8·0	9	54	1·0	16	10	7·3	22	17	0·8
	October, 1914.												
1	Thursday	4	41	8·0	10	49	0·6	17	10	7·5	23	7	0·6
2	Friday	5	38	8·2	11	36	0·3	18	1	7·7	23	55	0·5
3	Saturday	6	31	8·3	12	19	0·1	18	50	7·9	..		..
4	Sunday	0	38	0·4	7	13	8·4	13	2	0·1	19	37	8·1
5	Monday	1	19	0·5	7	53	8·4	13	39	0·2	20	13	8·2
6	Tuesday	1	53	0·7	8	29	8·4	14	15	0·4	20	49	8·2
7	Wednesday	2	31	1·0	9	8	8·3	14	47	0·6	21	23	8·1
8	Thursday	2	58	1·3	9	35	8·1	15	15	0·8	21	58	8·0
9	Friday	3	30	1·6	10	13	7·9	15	45	0·9	22	34	7·9
10	Saturday	4	7	1·8	10	49	7·7	16	25	1·4	23	12	7·9
11	Sunday	4	48	2·0	11	29	7·5	17	11	1·6	23	53	7·8
12	Monday	5	40	2·1	12	12	7·4	18	10	1·7	..		..
13	Tuesday	0	34	7·6	6	46	2·0	13	4	7·2	19	14	1·6
14	Wednesday	1	30	7·7	7	56	1·8	14	4	7·2	20	19	1·3
15	Thursday	2	31	7·8	9	0	1·3	15	4	7·4	21	19	1·0
16	Friday	3	31	8·1	9	55	0·7	16	8	7·8	22	16	0·5
17	Saturday	4	32	8·5	10	49	0·1	17	11	8·2	23	10	0·0
18	Sunday	5	28	8·9	11	40	−0·5	18	5	8·8	..		..
19	Monday	0	1	−0·4	6	23	9·3	12	31	−0·9	18	58	9·3
20	Tuesday	0	50	−0·6	7	16	9·6	13	18	−1·1	19	50	9·6
21	Wednesday	1	41	−0·7	8	7	9·7	14	6	−1·1	20	43	9·8
22	Thursday	2	29	−0·5	8	58	9·7	14	54	−0·8	21	34	9·7
23	Friday	3	19	−0·2	9	49	9·6	15	46	−0·4	22	23	9·5
24	Saturday	4	16	−0·2	10	41	9·1	16	42	−0·1	23	16	9·2

Auckland Tide-tables for 1914—*continued.*

Date.	Day.	H.	m.	Ft.	H.	m.	Ft.	H.	m.	Ft.	H.	m.	Ft.
	October—continued.												
25	Sunday	5	16	0·6	11	35	8·6	17	43	0·5	..		..
26	Monday	0	10	8·8	6	22	0·9	12	29	8·1	18	49	0·8
27	Tuesday	1	7	8·4	7	30	1·0	13	29	7·7	19	55	0·9
28	Wednesday	2	6	8·1	8	35	0·9	14	31	7·3	20	59	0·9
29	Thursday	3	8	7·8	9	31	0·7	15	36	7·2	21	51	0·8
30	Friday . .	4	13	7·8	10	19	0·5	16	41	7·4	22	40	0·8
31	Saturday	5	7	7·9	11	4	0·4	17	35	7·6	23	23	0·8
	November, 1914.												
1	Sunday	5	56	8·0	11	47	0·3	18	22	7·8	..		..
2	Monday	0	5	0·8	6	42	8·0	12	30	0·2	19	4	7·8
3	Tuesday	0	47	0·7	7	19	8·0	13	7	0·2	19	41	7·8
4	Wednesday	1	23	0·8	7	56	8·0	13	41	0·4	20	19	8·0
5	Thursday	2	1	0·9	8	34	7·9	14	16	0·6	20	55	8·1
6	Friday . .	2	32	1·3	9	10	7·9	14	47	0·8	21	32	8·1
7	Saturday	3	5	1·5	9	50	7·8	15	18	1·1	22	9	8·1
8	Sunday	3	42	1·7	10	26	7·7	16	1	1·3	22	47	8·1
9	Monday	4	31	1·8	11	9	7·6	16	51	1·5	23	31	8·1
10	Tuesday	5	25	1·8	11	55	7·6	17	40	1·5	..		..
11	Wednesday	0	14	8·0	6	22	1·8	12	43	7·5	18	37	1·5
12	Thursday	1	4	8·0	7	26	1·5	13	34	7·5	19	45	1·3
13	Friday . .	1	57	8·1	8	32	1·0	14	35	7·6	20	51	0·9
14	Saturday	2	58	8·1	9	29	0·5	15	39	7·8	21	49	0·5
15	Sunday	4	0	8·4	10	20	0·0	16	40	8·2	22	44	0·1
16	Monday	4	58	8·7	11	13	−0·5	17	40	8·6	23	37	−0·2
17	Tuesday	5	56	8·9	12	4	−0·8	18	34	9·0	..		..
18	Wednesday	0	25	−0·4	6	53	9·2	12	56	−1·0	19	31	9·3
19	Thursday	1	21	−0·5	7	47	9·3	13	44	−0·9	20	22	9·5
20	Friday . .	2	12	−0·4	8	40	9·3	14	35	−0·7	21	13	9·6
21	Saturday	3	4	−0·2	9	34	9·2	15	27	−0·4	22	6	9·5
22	Sunday	3	57	0·2	10	25	9·0	16	21	0·1	22	56	9·3
23	Monday	4	56	0·5	11	17	8·6	17	19	0·5	23	48	8·9
24	Tuesday	5	59	0·7	12	8	8·2	18	23	0·8	..		..
25	Wednesday	0	40	8·6	7	1	0·9	13	4	7·8	19	25	1·0
26	Thursday	1	33	8·1	7	57	0·8	14	1	7·5	20	23	1·1
27	Friday . .	2	29	7·8	8	53	0·8	14	57	7·2	21	17	1·1
28	Saturday	3	23	7·6	9	42	0·7	15	56	7·2	22	7	1·1
29	Sunday	4	21	7·5	10	30	0·6	16	52	7·3	22	52	1·1
30	Monday	5	14	7·6	11	12	0·5	17	41	7·5	23	35	1·1
	December, 1914.												
1	Tuesday	6	0	7·6	11	52	0·5	18	27	7·6	..		..
2	Wednesday	0	14	1·0	6	45	7·7	12	32	0·5	19	10	7·9
3	Thursday	0	55	1·1	7	25	7·8	13	13	0·6	19	47	8·1
4	Friday . .	1	33	1·1	8	5	7·9	13	49	0·7	20	27	8·3
5	Saturday	2	11	1·2	8	46	8·0	14	24	0·8	21	7	8·4
6	Sunday	2	49	1·2	9	30	8·0	15	2	0·9	21	48	8·5
7	Monday	3	28	1·3	10	11	8·0	15	42	1·0	22	28	8·5
8	Tuesday	4	13	1·4	10	55	7·9	16	23	1·1	23	11	8·5
9	Wednesday	5	2	1·4	11	39	7·9	17	21	1·3	23	53	8·4
10	Thursday	5	57	1·3	12	25	7·8	18	19	1·3	..		..
11	Friday . .	0	42	8·3	6	59	1·1	13	14	7·8	19	23	1·2
12	Saturday	1	34	8·1	7	59	0·8	14	9	7·7	20	26	1·0
13	Sunday	2	29	8·1	8	58	0·5	15	10	7·8	21	27	0·8
14	Monday	3	32	8·2	9	58	0·1	16	16	8·1	22	22	0·4
15	Tuesday	4	35	8·3	10	51	−0·2	17	17	8·4	23	17	0·2
16	Wednesday	5	35	8·5	11	44	−0·4	18	19	8·8	..		..
17	Thursday	0	11	0·0	6	35	8·7	12	37	−0·5	19	15	9·1
18	Friday . .	1	5	−0·2	7	32	8·9	13	27	−0·6	20	8	9·4
19	Saturday	1	57	−0·2	8	26	9·0	14	17	−0·5	20	59	9·5

C-1A.



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Fode

10
11
12
13
14
15
16
17
Midnight
Midnight
1913. 5. 10 9.27 a.m.
1913. 5. 17 9.20 a.m.
Mean Line for Barometer = 30.00 in
Approx. Mean Sea Level 37.931 FT.
36.131 FT. Datum from which heights are measured.

— Note: Velocity of Wind shown: ◎ South plotted below mean line, North above. —
— Scale — 1 inch = 250 miles per 24 hours. —

— Wellington, 1913, May 10-17. —

— Predictions shown ┼ —
— Barometer shown ⊙ — Scale-full size. —

— Scales:- — Horizontal — 1 inch = 3·98 Hours. —
— Vertical — 1 inch = 0·97 Feet. — } For Tide curve. —

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AUCKLAND TIDE-TABLES FOR 1914—*continued.*

December—continued.

Date.	Day.	H.	m.	Ft.	H.	m.	Ft.	H.	m.	Ft.	H.	m.	Ft.
20	Sunday	2	47	−0·1	9	19	9·0	15	8	−0·2	21	48	9·5
21	Monday	3	38	0·1	10	6	8·9	16	0	0·1	22	35	9·4
22	Tuesday	4	32	0·3	10	54	8·6	16	55	0·5	23	22	9·0
23	Wednesday	5	28	0·5	11	43	8·3	17	50	0·8	..		..
24	Thursday	0	10	8·6	6	21	0·7	12	32	7·9	18	45	1·1
25	Friday..	0	58	8·0	7	17	0·9	13	20	7·5	19	43	1·3
26	Saturday	1	46	7·7	8	10	0·9	14	13	7·2	20	36	1·4
27	Sunday	2	38	7·4	8	59	0·9	15	8	7·1	21	23	1·5
28	Monday	3	30	7·2	9	48	1·0	16	3	7·1	22	10	0·9
29	Tuesday	4	23	7·2	10	35	1·5	16	56	7·3	22	56	1·4
30	Wednesday	5	19	7·3	11	16	0·8	17	47	7·6	23	41	1·4
31	Thursday	6	10	7·5	11	58	0·8	18	35	7·9	..		..

The work of the year has comprised the predictions of the tides for 1914 both for Wellington and Auckland, also the examination of the tidal records of Melbourne, Dunedin, Port Chalmers, Bluff, and Lyttelton. The harmonic analysis of the tides of Dunedin is in hand, as well as the predictions for 1915 for Wellington.

Inspections were made of the tide-gauges at Wellington, Bluff, Dunedin, and Port Chalmers, and suggestions given to the officers in charge of the gauges as to the necessary checks to be applied periodically to the gauges to keep them as accurate as possible. After careful examination of these records advice was given as to the necessary precautions to be taken to make the records sufficiently reliable for use in making harmonic analyses from.

A new tide-predicting machine has been designed, and all the necessary calculations made for it; difficulties in construction, however, have to be overcome and have delayed the machine. These are not serious, so the machine may be expected to be in working-order soon. If the machine works as well as it is anticipated, a very considerable saving in time will be effected in the tidal predictions. This is urgently wanted, as under present arrangements and with a limited staff there is very little time available for the analysis of the tides of the other ports.

For the very large amount of arithmetical work the various calculating-machines in use have been of the greatest assistance. For the additions the Mercedes adding-machine has been used regularly; this machine has one set of keys numbered from 0 to 9, and can add columns of figures nine digits wide; it is compact and easily portable, and is well made and reliable in its action. The Rapid Computer, a small adding-machine, has also been used. For the multiplications, &c., the Brunsviga calculating-machine, with printing attachment, and the Millionaire calculating-machine have been used. For plotting the numerous curves required the very fine Coradi co-ordinatograph is employed; by this machine rectangular co-ordinates can be readily plotted to 1/1000 of an inch. For checking harmonic analysis the harmonic analyser, designed by Dr. O. Mader has been used on curves plotted by the co-ordinatograph. The analyser is well made, and works on a base of 24 in. For a description of it see *Elektrotechnische Zeitschrift*, 1909, Nos. 34, 35.

CHECKS OF PREDICTIONS.

As in former years, checks are constantly applied to the predicted times and heights of high and low water. The figure shows a portion of the record made by the tide-gauge described and illustrated in the Tidal Survey Report for 1911–12. This gauge is at present working in the N shed of the Wellington Harbour Board, on Jervois Quay.

On the figure the predicted high and low waters, as determined by the Tidal Survey, are plotted, and it will be seen how closely the predictions agree with actuality. A check of this kind proves the accuracy of the predictions and gives confidence in the results of the Tidal Survey. As will be seen from the figure, the predicted heights vary slightly from the actual heights; this is due to the winds and barometric pressure, which have a marked influence on the height of the tide. The wind-velocity for the preceding twenty-four hours, measured at 9 a.m. each day, is shown plotted at twelve hours earlier—*i.e.*, at 9 p.m.—and gives a general indication of its effect on the heights; while the height of the barometer is also shown for each day on the diagram.

The predictions are for average conditions, and the heights accordingly require slight corrections for the wind and barometric pressure for any given day. The times of high and low water are not altered by the barometric conditions or by the winds, and, as will be seen from the figure, the predicted times agree very closely with actuality.

General.—Messrs. T. G. Gillespie and J. J. Hay have assisted in the calculations of the tidal survey in a satisfactory manner, and they are now conversant with the details of the calculations both for the harmonic analysis of the tidal records and for the prediction of the tides. Their work has been of a technical nature, involving great care to guard against errors, and has been carried out accurately.

APPENDIX VI.

THE MAGNETIC OBSERVATORY AND THE MAGNETIC SURVEY.

THROUGHOUT the year the Magnetic Observatory has been maintained in continuous operation, and the usual routine work of obtaining magnetic, seismological, and meteorological records has been duly performed. The prearranged term-hour observations in connection with the Antarctic expeditions have been made as in the previous year. Copies of the records and observations obtained during term-hours are now being made for transmission to the authorities of the expeditions.

Towards the end of 1912 the new set of Eschenhagen-Toepfer magnetographs arrived, and these were installed in an above-ground magnetograph house at Amberley, thirty-four miles north of Christchurch, so as to be beyond the disturbing influences of the electric-tramway currents. It was thus found possible to observe all the later term-hours with these instruments, and magnetograms of declination, horizontal force, and vertical force were obtained for all these term-hours, including those occurring in daylight-hours.

It is proposed to improve the installation of these magnetographs somewhat, chiefly with regard to temperature insulation, and providing an electric recording-light and time-marking arrangement, and then to keep them in continuous operation, and obtain undisturbed records from them.

Our thanks are due to Dr. Atkinson and Mr. Wright, of the scientific staff of Captain Scott's Expedition, for securing to the Observatory the gift of the valuable storage battery used by Dr. Simpson and Mr. Wright in the Antarctic in conjunction with their magnetographs. The only condition attached to the gift is that I persuade the Government to install and use them in the Amberley substation.

During the year, on the occasion of the several visits of the "Terra Nova" to Lyttelton, facilities were given to Lieutenant Pennell, R.N., and other officers of the "Terra Nova," for the standardization of their dip and total force circles, and the necessary information as to the simultaneous observatory values has been made out and given to Lieutenant Pennell.

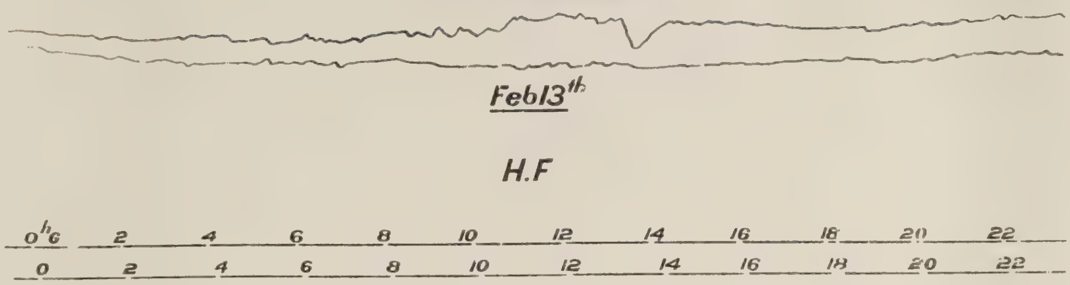
The "Terra Nova" went south to the relief of Captain Scott's shore party early in the summer, and returned unexpectedly early in February with the news of the gallant and successful attempt made by Captain Scott, Dr. Wilson, Captain Oates, Lieutenant Bowers, and Petty-officer Evans to reach the South Pole over the difficult route by which Sir Ernest Shackleton had previously arrived within a hundred miles of the pole. Deep sympathy and sadness were, however, aroused by the news of the death of these brave men on their journey back from the pole. They died nobly, after undergoing incredible hardships, through the protracted continuance of a terrible blizzard. Magnetic science already owes a deep debt of gratitude to Captain Scott, a debt which will be increased many fold when the magnetic results of his last and glorious expedition have been published.

Upon the return of the "Terra Nova," Mr. Wright, physicist to the expedition, with other officers, lost no time in resorting to the Observatory to complete their necessary labours there in the comparison of instruments, &c. Mr. Wright was enabled to again swing the gravity pendulums of the expedition under conditions considerably improved, and direct telegraphic communication was made, by the courtesy of the Department of Telegraphs, with the Government Astronomical Observatory in Wellington for the transmission of time-signals here. In addition, and to guard against the possibility of bad weather preventing star-observations in Wellington, star transits for time were observed at the Magnetic Observatory with a smaller instrument. The ship and the shore magnetic instruments of the expedition were again compared with the Observatory standard by Lieutenant Pennell, R.N., Dr. Levick, and Mr. Wright, and letters since received here evince the satisfaction with which these gentlemen regard their work at the Observatory, and the great usefulness of the Observatory to the expedition.

Mention must also be made of the very successful magnetic work of the Antarctic Expedition (Australian) by and under the direction of Mr. Eric N. Webb. The weather experienced by the expedition was generally more severe than that experienced at Captain Scott's base; but, despite the conditions, I think that the magnetic results will be equally good, and the simultaneous operations of magnetographs on either side of the magnetic pole may be expected to yield very valuable scientific results. Dr. Mawson reports auroræ of unexampled brilliancy. During his enforced sojourn in the Antarctic this winter Dr. Mawson intends to continue the registration by the magnetographs, and now that his wireless telegraph is working so well, it is expected that he will arrange by telegraph for simultaneous open-scale runs at all observatories during some of the longer-continued aurora.

C-1A.

Feb 14th 1913 G.M.C.T



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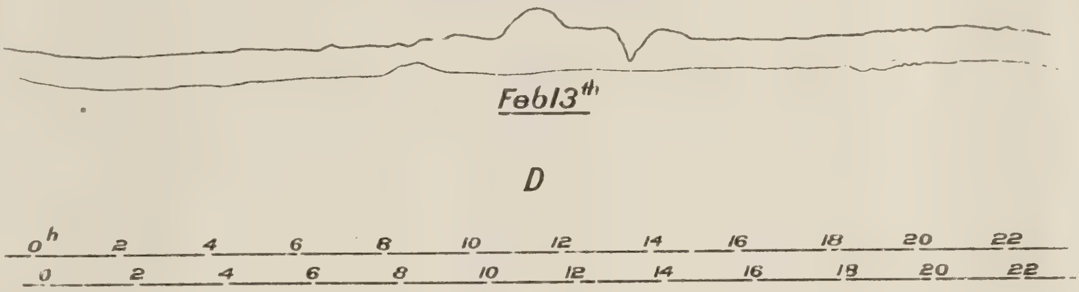
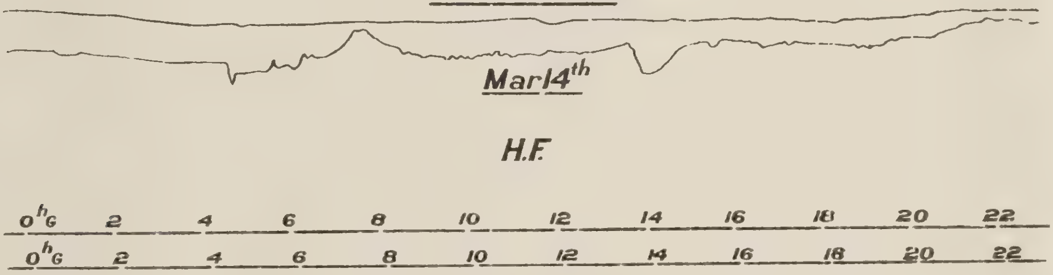
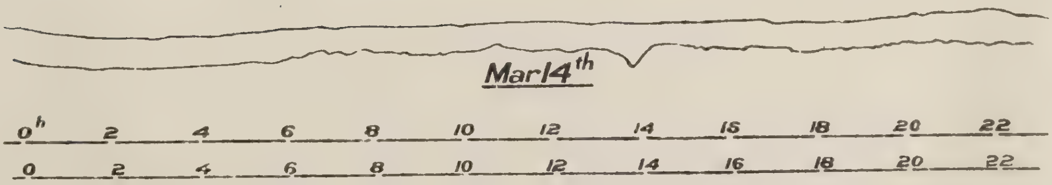


March 13th 1913

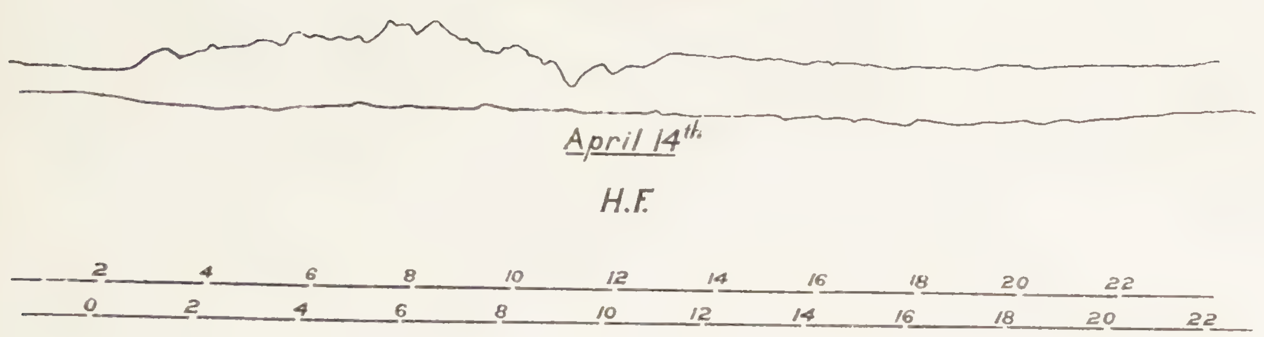


March 13th 1913 G.M.C.T.

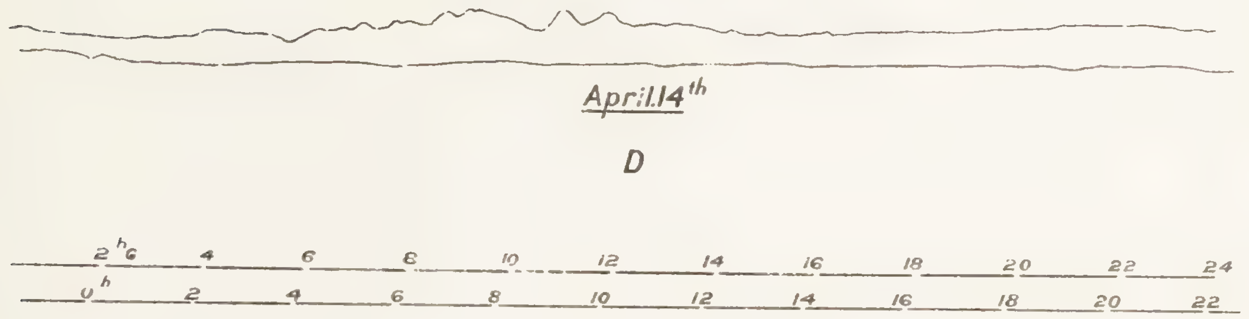


C – 1A.

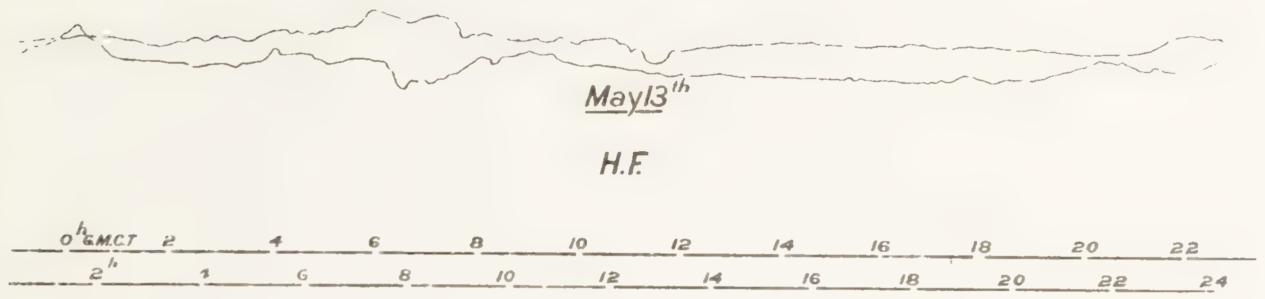
April 15th 1912 G.M.C.T.



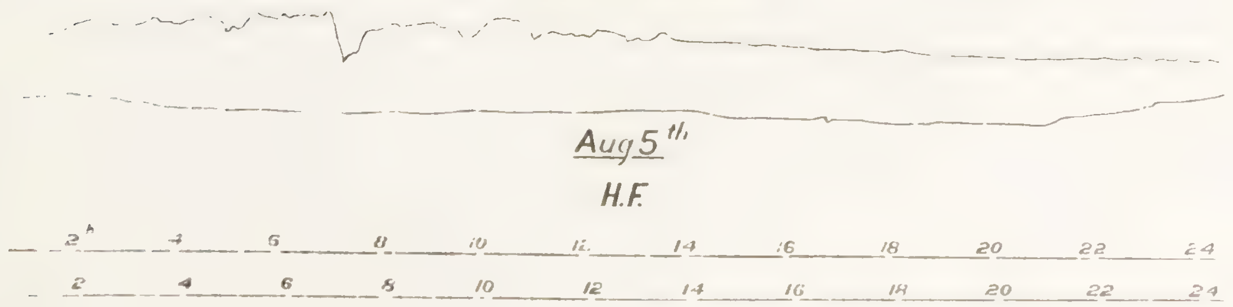
April 15th 1912 Gr



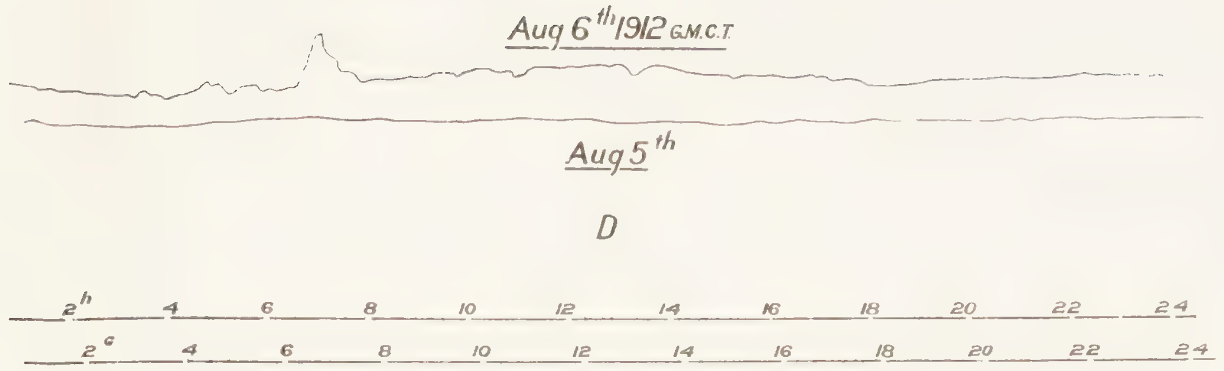
May 12th 1912



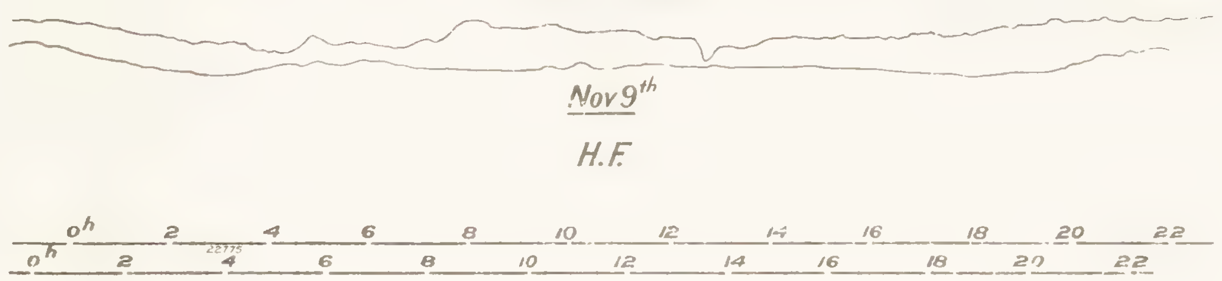
Aug 6th 1912 G.M.C.T.



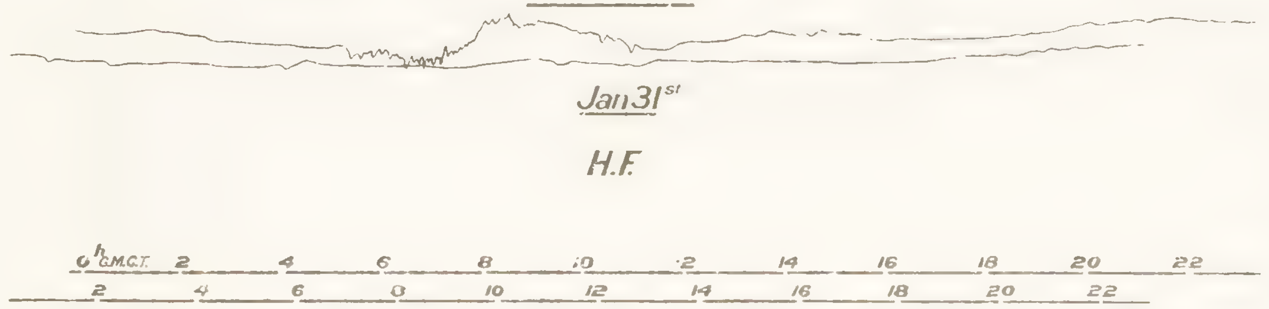
Aug 6th 1912 G.M.C.T.



Nov 10th 1912 G.M.C.T.



Jan 30th 1913 G



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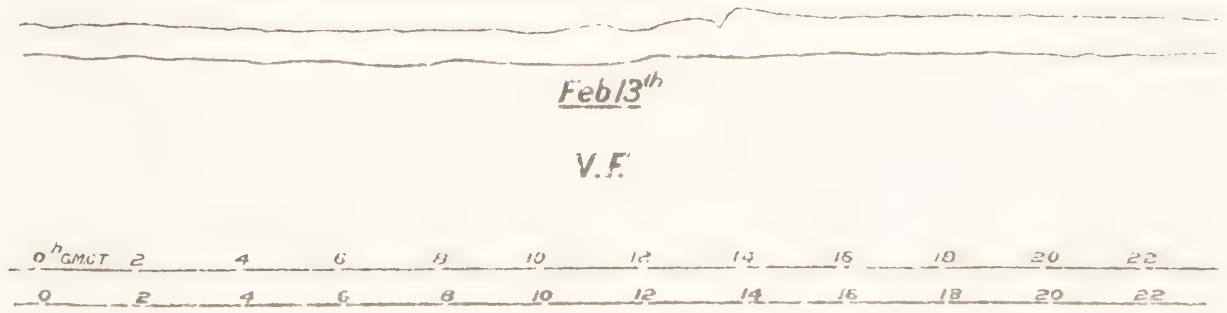
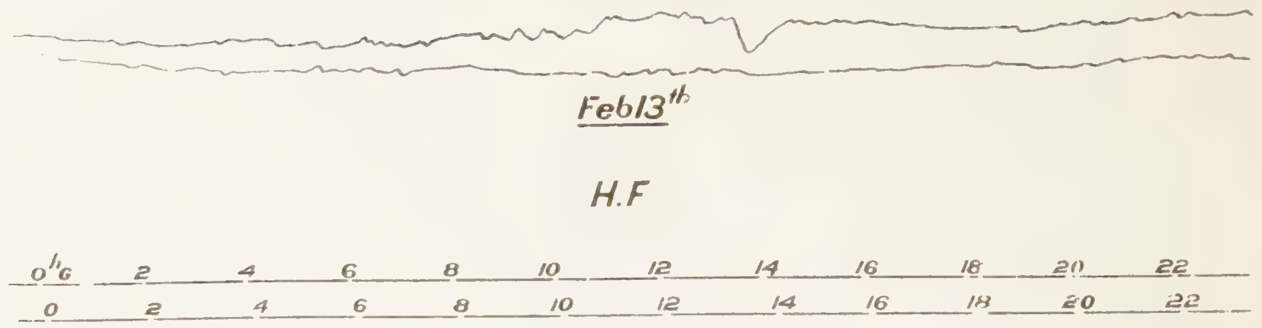


Feb 14th 1913 G.M.C.T.



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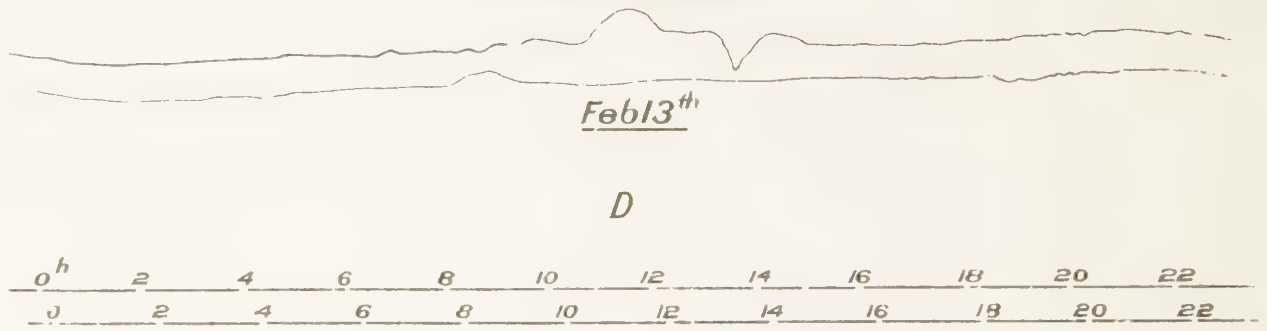
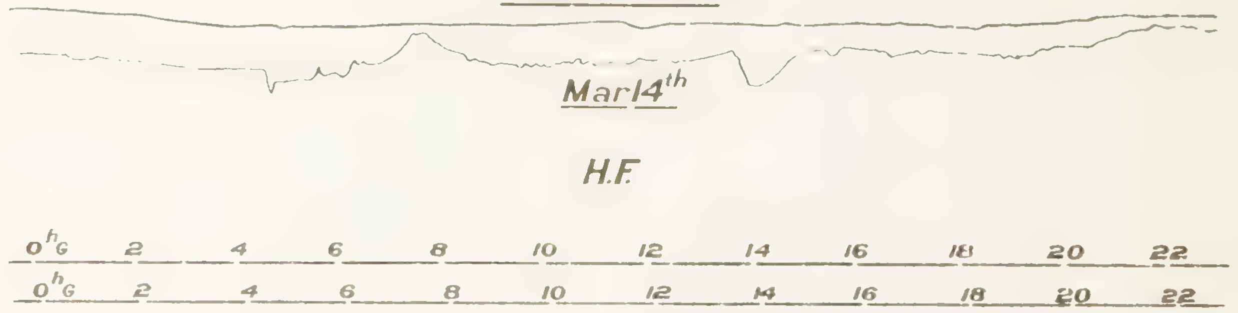


March 13th 1913



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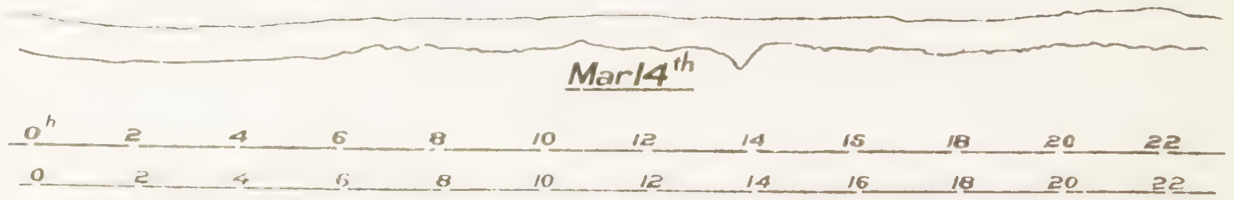


The Adie Magnetographs.—These have been kept in continuous operation, and all the daily magnetograms developed. A large portion of these have also been measured at hourly intervals for declination, horizontal force, and vertical force. In addition, the measurement of the curves for the previous two years, 1910 and 1911, was completed, and the mean annual values derived from the international "quiet" days have been found to be as follows:—

Year.	Declination. (East of North.)	Horizontal Force. C.g.s.	Inclination.	Vertical Force. C.g.s.
1910 (January–December) ..	16° 37·6′ E.	0·22511	67° 54·8′ S.	0·55474
1911 ,, ..	16° 39·0′ E.	0·22494	67° 56·2′ S.	0·55497
Increment	+ 1·4′	− 0·00017	+ 1·4′	+ 0·00023

The above have been forwarded to Kew, for publication in their list of values for observatories.

The necessary absolute magnetic observations for standardizing the magnetic curves have been duly made, and computed throughout the year.

Twelve of the principal magnetograms obtained are published herewith, reduced to three-eighths of the originals.

For purposes of comparison it is noted that on the reproduced curves the ordinates have the following values:—

Declination curves .. .. + 1 mm. = − 3·0′.
Horizontal force curves .. .. .. + 1 mm. = − 0·00014 c.g.s. unit.
Vertical force curves .. .. .. + 1 mm. = − 0·00012 c.g.s. unit.

It has been found that the constancy of base-line of the magnetographs has much improved of late years upon that of the early years of the running of these magnetographs. This is usually experienced in new observatories, a steady state being gradually attained.

A table of monthly means of hourly values from all days for the years 1902, 1903, 1904 is published herewith. It will be useful for comparing the mean diurnal variation at Christchurch with that at other observatories, especially with respect to seasonal differences.

The Milne Seismograph No. 16.—This instrument has been kept continuously recording, and all the daily seismograms have been developed and records measured. Records were obtained of thirty-one earthquakes, a smaller number than in previous years. This may partly be explained, however, by the fact that night-tremors due to local and instrumental effects have been more pronounced, and the tendency of these is to mask the effects of some of the smaller and far-distant shocks. The boom period of the instrument has been approximately 15 seconds through the year, as recommended. At first, after the removal and replacement of the boom during the installation of the new recorder, difficulty was experienced in keeping the period high, but now that the condition of the instrument has become more stable, it is intended to bring the period up to 20 seconds, to bring the recording into line with that of the Sydney seismograph-station, which now runs with the period at 20 seconds.

A table of times, &c., of earthquakes recorded here is appended, and it will be noticed that several of the records are those of mega-seisms of more or less violence occurring in the Dominion.

The seismograms of ten of the principal earthquakes are published herewith.

Meteorological Observations.—The usual daily observations of air-pressure, temperature, humidity, cloud, and wind have been made at 9·30 a.m. and at 5 p.m. throughout the year. The recording barograph and thermograph have been kept in continuous operation. Daily epitomes of meteorological observations have been published daily in the newspapers, and monthly returns have been forwarded for the information of the Weather Forecast Department.

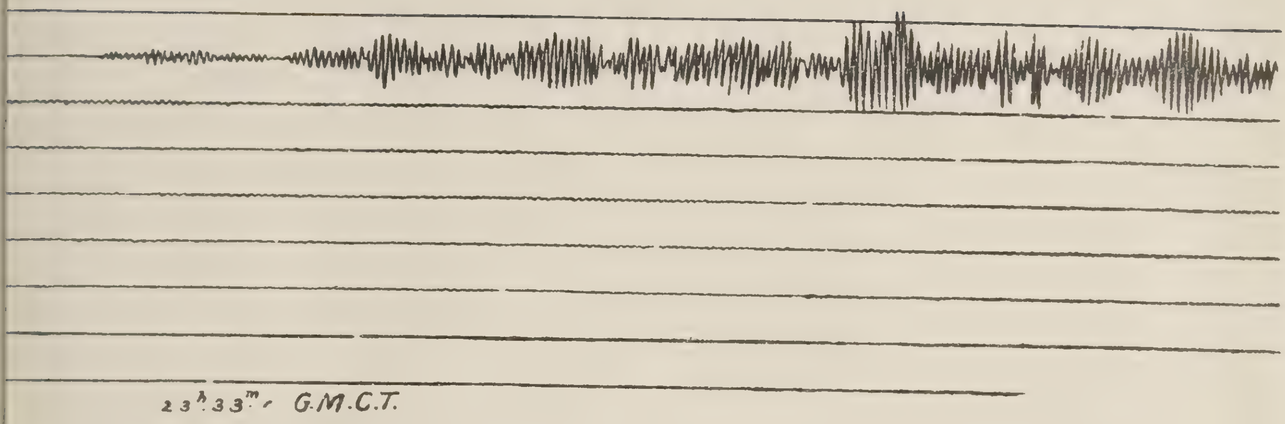
In conclusion, I have to acknowledge the services of my assistant, Mr. T. Maben, throughout the year. I have also to return thanks to the various scientific institutions and observatories which have contributed publications and observations to this Observatory.

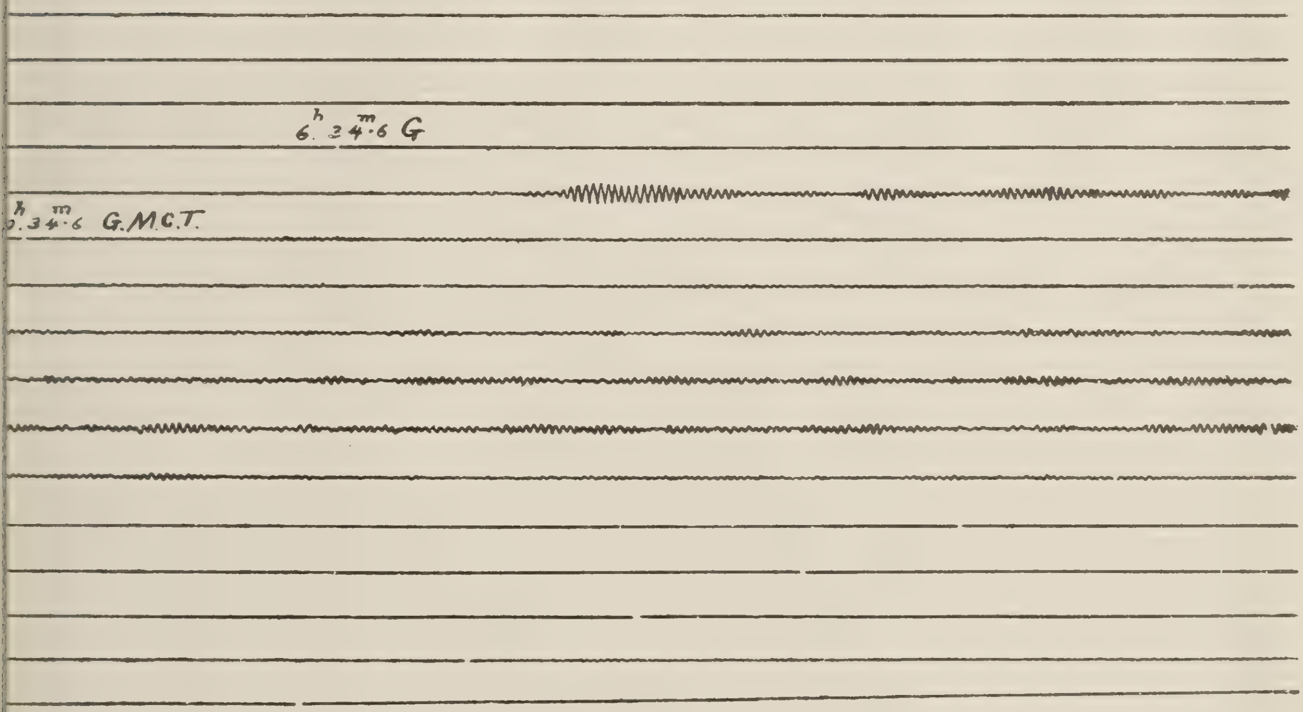
I have, &c.,
Henry F. Skey, B.Sc.,
Officer in Charge.

Earthquake Records of Milne Seismograph No. 16, at Christchurch, with New Type of Recorder.

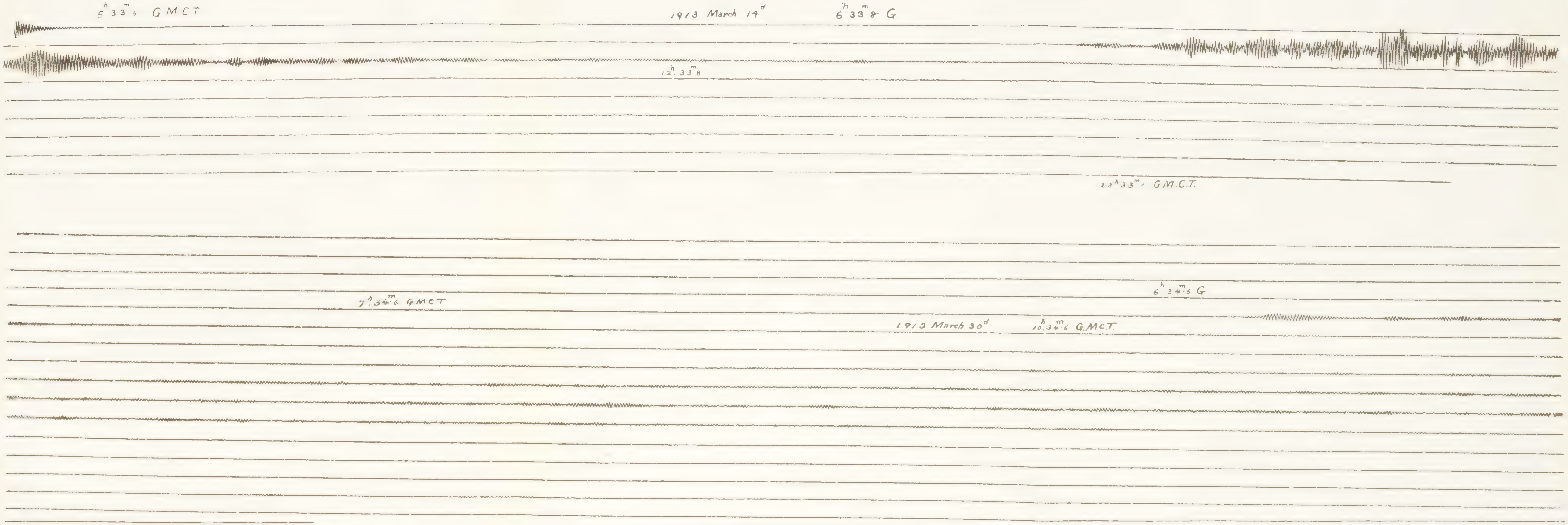
Latitude, 43° 31′ 48″ S.; longitude, 172° 37′ 13″ E.; time employed, Greenwich civil time. Amplitude = half-range in millimetres.

Date.	Commencement.		Maxima.		Maximum Amplitude.	Duration.		Natural Boom Period.	Remarks.
1912.	H.	M.	H.	M.	Millimetres.	H.	M.	Seconds.	
April 14	22	47·5	22	57·5	9·9	1	18·0	15	
,, 15	16	20·0	16	26·3	2·0		..	..	
			16	27·4	1·7		..	..	End obscured by N.T.
,, 20	1	47·2	2	06·5	1·5	2	0·3	..	
May 15	0	11·3	0	13·3	1·9		..	..	
			0	15·8	2·2		..	..	
			0	19·5	2·2	1	00·0	..	
,, 17	13	58·1	13	59·0	0·6		..	..	
			14	03·0	0·9		..	..	Duration obscured by N.T.
			14	06·0	0·5		..	..	
.. 23	2	44·7	3	22·7	0·4	1	39·0	..	Mean period of long waves, 40 secs., 30 secs., and 20 secs. successively.
,, 26	6	38·8	6	40·8	6·0	0	55·3	..	Origin, North Island, New Zealand. L.W. commence, 6 h. 39 m.
June 6	17	39·2	17	45·0	0·4		..	..	Duration obscured by N.T.
July 7	9	44·8	9	47·8	0·2		..	..	
			9	54·0	0·2		..	..	
			9	58·2	0·2	0	28·0	..	Waves 24 secs. period.
19	21	36·0	21	55·4	2·4		..	..	
			22	10·0	0·8	1	50·2	15	Excellent record.
,, 25	23	15·3	23	33·8	1·1		..	..	
			24	02·5	0·5	2	02·0	..	
,, 26	2	33·6	3	00·8	1·8		..	..	
			3	29·0	1·0	2	20·0	..	
,, 26	7	57·4	8	13·1	2·4		..	..	
			8	15·9	1·2		..	..	
			8	18·0	1·3		..	..	
			8	24·3	0·8		..	..	
			8	29·0	0·5	1	29·0	15	
Aug. 6	23	15·5	23	33·5	2·0		..	..	Duration obscured by N.T.
			23	33·9	1·1		..	..	
			24	02·7	0·5	2	+	..	
,, 7	2	37·5	2	58·7	2·0		..	..	
			3	26·5	1·0	2	00·0	..	
,, 9	1	57·5	3	04·5	1·4		..	..	Succession of tremors, with maxima increasing and decreasing gradually.
			3	10·5	1·8		..	..	
			3	16·0	1·1		..	..	
			3	20·2	1·0	3	00·0	..	
,, 16	23	18·4	23	20·2	0·4	0	09·6	..	
,, 17	19	30·7	19	40·0	1·1		..	..	
			19	51·0	..		..	..	End obscured by N.T.
,, 18	8	17·0	8	20·0	0·2	0	32·0	..	
Sept. 1	5	23·0	5	35·0	0·5	1	32·0	..	
,, 29	21	09·8	21	29·8	3·1		..	..	
			21	34·1	3·7		..	..	
			21	42·6	2·9		..	..	
			21	45·1	2·5		..	..	
			21	48·8	2·0	3	16·0	15	
Oct. 16	4	05·1	4	06·8	1·0		..	..	Duration uncertain.
			4	10·3	0·4		..	..	
,, 17	10	08·0	10	16·8	1·0		..	..	
,, 20	9	39·5	9	44·4	2·0		..	..	
			9	47·9	1·7		..	..	End obscured by N.T.
Nov. 13	0	44·0	0	49·3	0·2		..	..	
			0	53·5	0·5	1	11·0	..	
Dec. 6		..	11	01·6	1·0		..	..	Duration uncertain.
1913.									
Jan. 24	4	35·6	4	35·7	1·6	0	06·1	..	Felt at Christchurch; origin, near Masterton, North Island, N.Z.
Feb. 22	1	09·1	1	09·7	4·0	0	52·0	..	Origin, near Westport, N.Z.
Mar. 10		..	14	10·5	0·8		..	14	Duration obscured by N.T.
,, 14	8	56·8	9	06·0	4·0		..	..	
			9	11·4	3·5		..	..	
			9	22·5	7·0		..	..	
			9	28·6	5·0		..	..	
			9	32·2	5·5		..	..	
			9	38·6	5·0	2	28·0	..	
,, 30	8	43·0	8	48·0	1·5		..	..	End obscured by N.T.



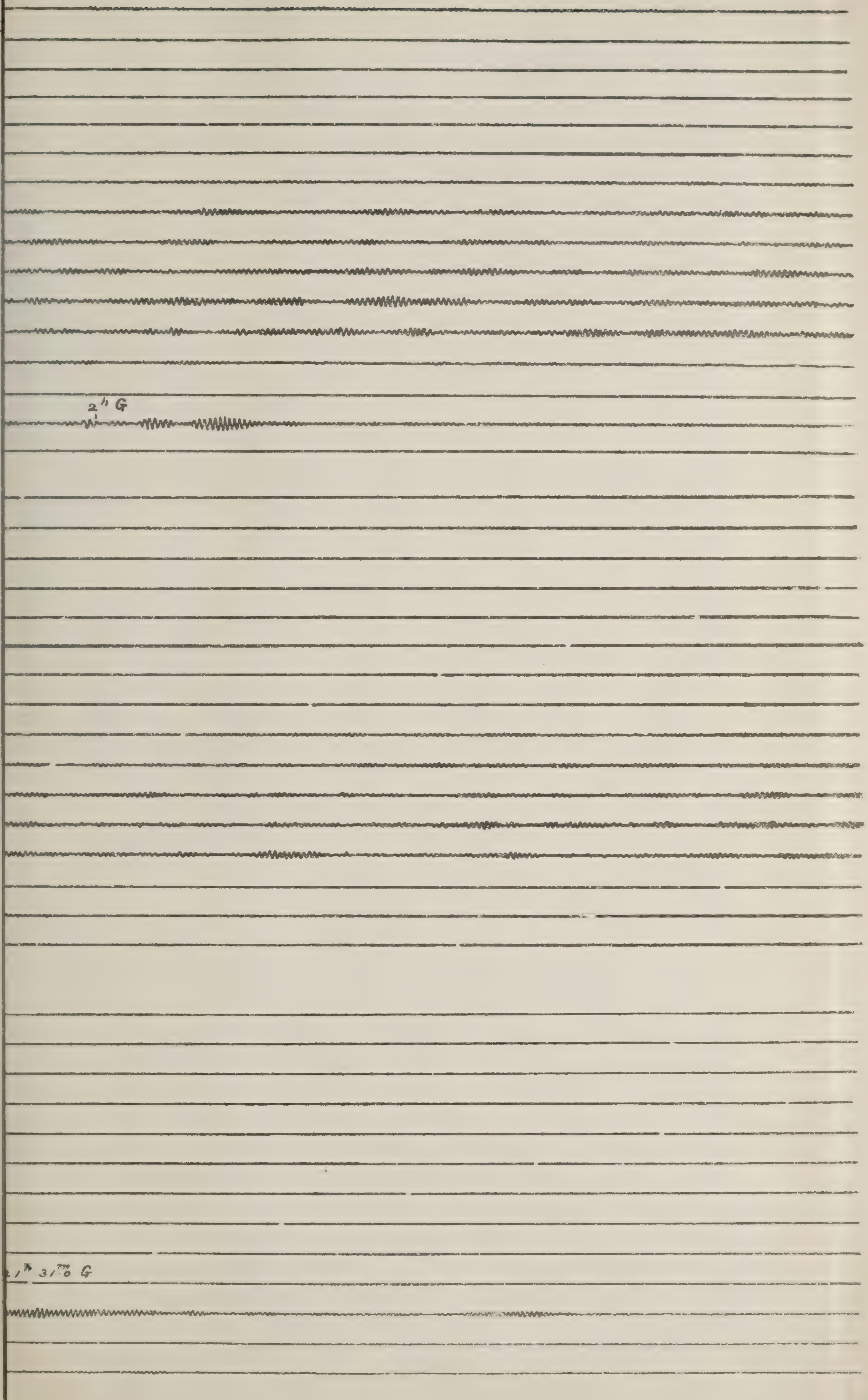


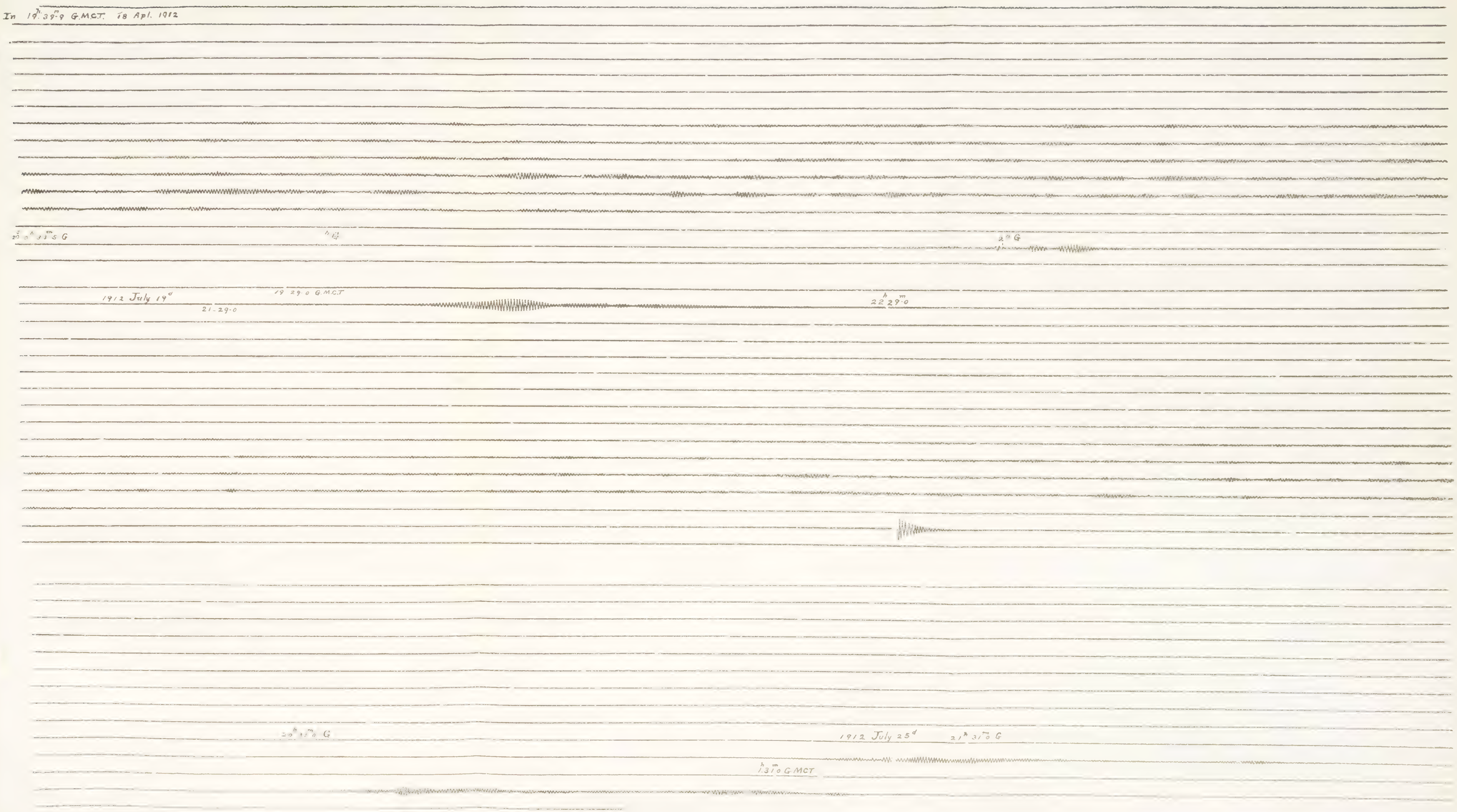
I.



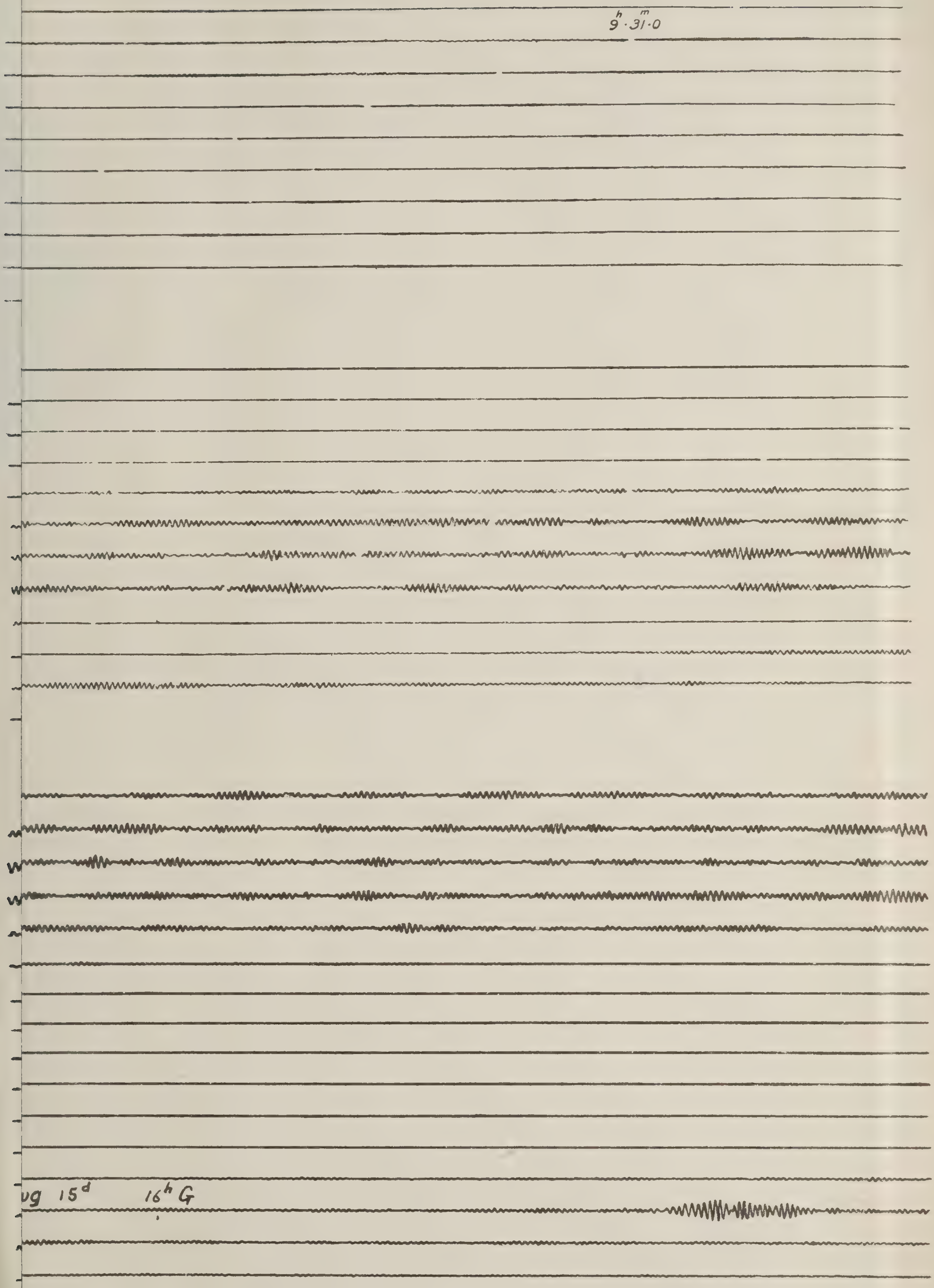
Records by Milne Seismograph No. 16, at Christchurch.

1.

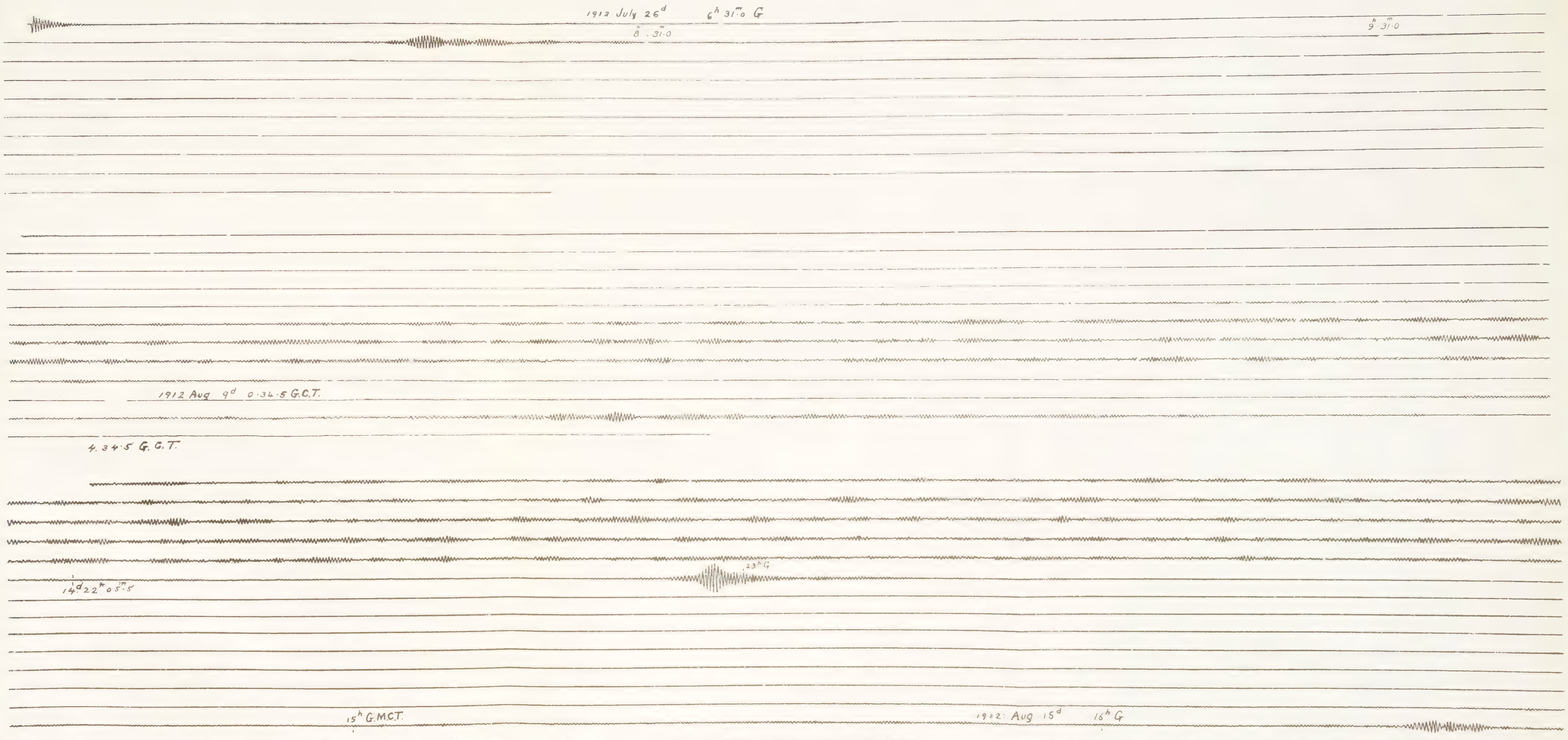

2h G
1h 31m·0 G



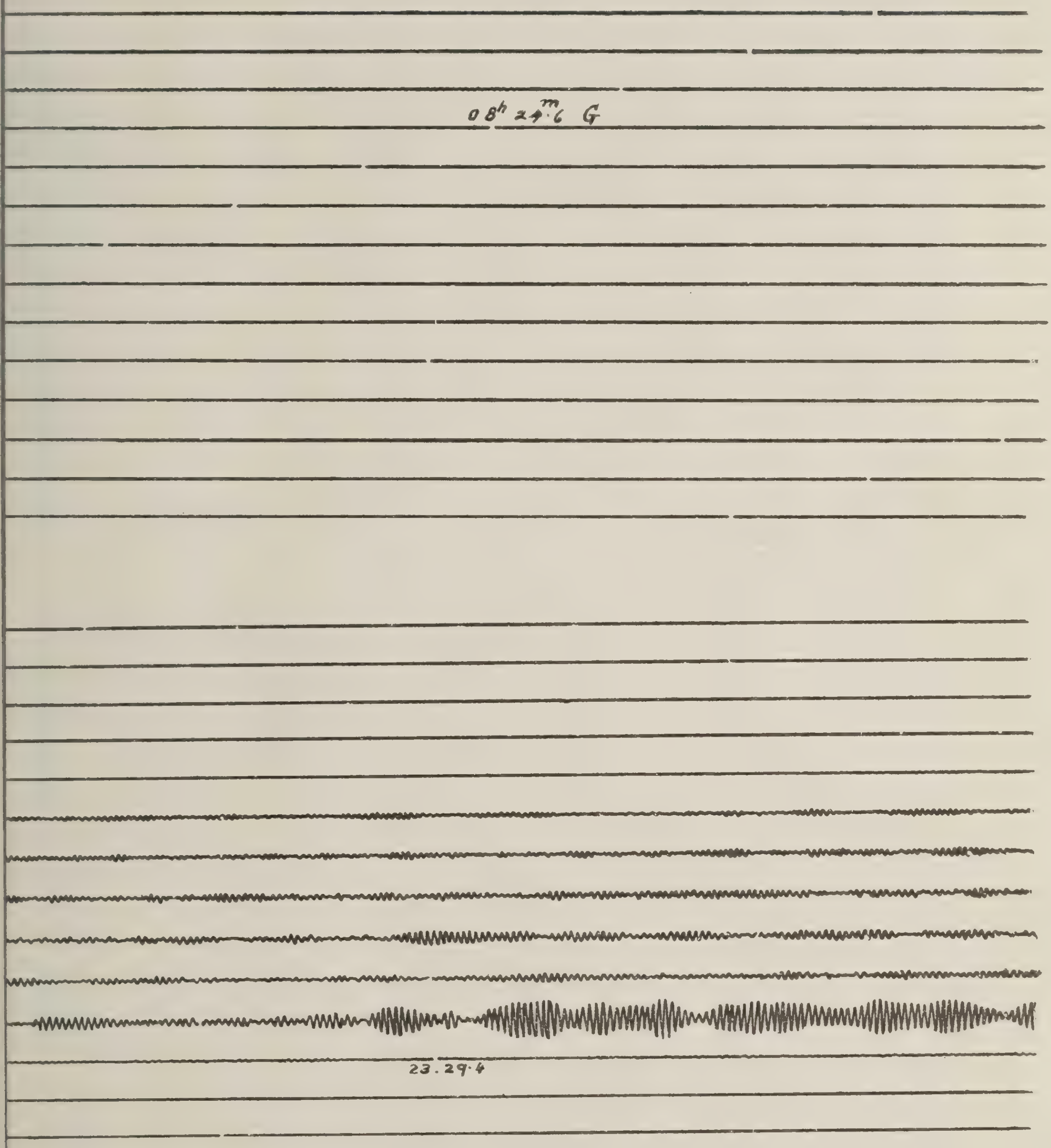
Records by Milne Seismograph No. 16, at Christchurch.



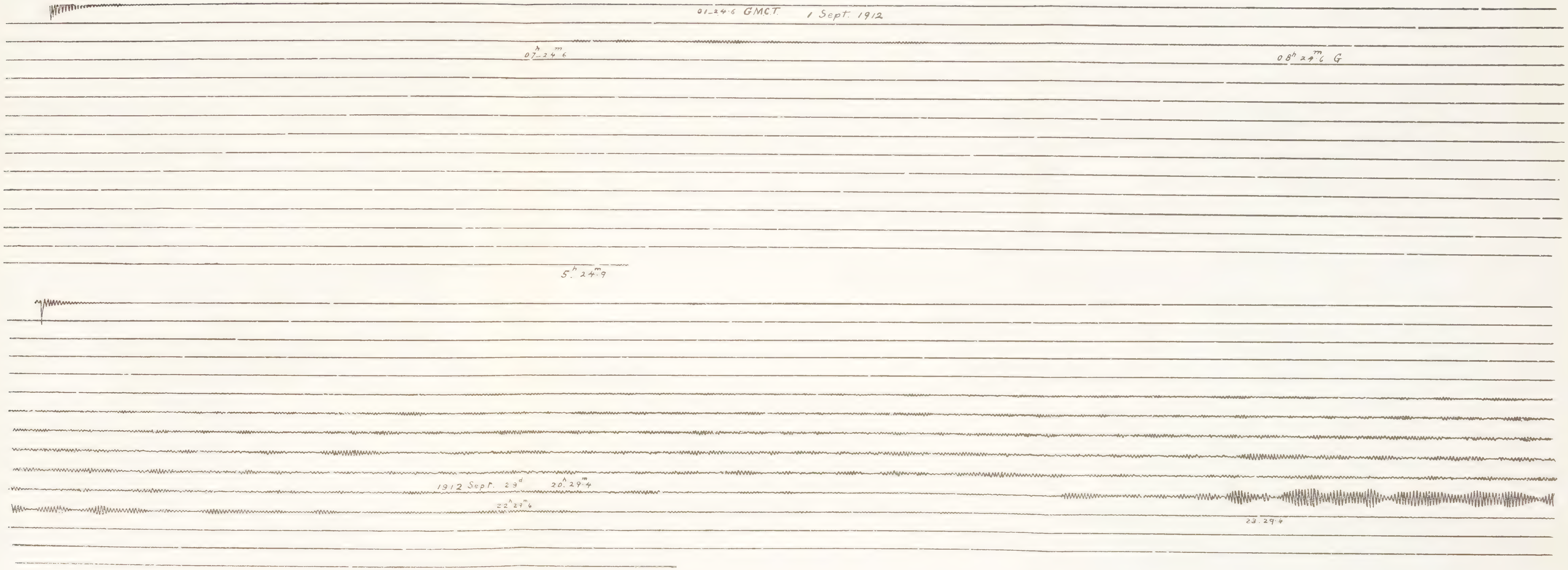
3.



Records by Milne Seismograph No. 16, at Christchurch.



4.



1500.8.13.416.

Records by Milne Seismograph No. 16, at Christchurch.

Table of Hourly Means for Months—1902.

Month.	0h.	1h.	2h.	3h.	4h.	5h.	6h.	7h.	8h.	9h.	10h.	11h.	12h.	13h.	14h.	15h.	16h.	17h.	18h.	19h.	20h.	21h.	22h.	23h.	Mean.
Declination (east of north): 16° + . . .′																									
	Min.	Min.	Min.	Min.	Min.	Min.	Min.	Min.	Min.	Min.	Min.	Min.	Min.	Min.	Min.	Min.	Min.	Min.	Min.	Min.	Min.	Min.	Min.	Min.	Min.
January	15·0	16·9	17·7	17·5	16·6	16·0	15·6	15·5	15·0	14·7	14·6	14·2	14·1	14·0	13·8	13·7	13·7	13·7	13·0	12·3	11·5	11·3	11·9	13·3	14·4
February	15·1	16·7	17·9	17·6	16·5	15·6	14·9	14·8	14·3	14·2	13·7	13·5	13·6	13·4	13·6	13·6	13·5	13·5	13·2	12·1	10·8	10·5	11·9	13·3	14·0
March	14·8	16·9	18·3	18·5	17·5	16·0	15·0	15·0	14·8	14·4	14·1	14·0	13·9	14·0	13·9	14·2	14·0	13·9	13·9	12·9	11·4	10·1	10·1	11·5	14·2
April	13·6	16·0	17·3	17·3	16·3	15·3	14·6	14·5	14·1	13·7	13·5	13·2	13·2	13·5	13·7	13·8	13·9	14·0	14·0	13·7	13·0	12·0	11·2	11·7	14·0
May	14·0	15·8	16·9	16·9	16·6	15·6	15·3	15·1	14·9	14·6	14·5	14·4	14·2	14·3	14·4	14·6	14·7	15·0	14·8	14·7	14·4	14·0	13·3	13·3	14·8
June	14·1	15·1	16·1	16·4	16·1	15·1	14·8	14·7	14·5	14·4	14·2	14·3	14·3	14·3	14·5	14·4	14·8	14·9	14·8	14·8	14·7	14·4	13·9	13·9	14·7
July	14·1	15·4	16·7	17·2	17·1	16·0	15·4	15·2	15·0	14·6	14·6	14·4	14·5	14·6	14·8	15·1	15·2	15·2	15·1	15·1	14·9	15·1	14·1	13·7	15·1
August	14·4	15·9	17·1	17·6	17·6	16·9	16·1	15·9	15·7	15·4	15·5	15·4	15·4	15·4	15·5	15·6	15·7	15·8	15·6	15·8	15·5	14·8	13·9	13·8	15·7
September	15·8	17·5	18·7	18·9	18·4	17·7	17·0	16·8	16·6	16·1	16·0	15·9	15·8	15·9	16·1	16·2	16·4	16·3	16·2	15·9	14·9	13·7	13·2	14·0	16·3
October	17·2	19·2	20·2	20·0	18·9	17·8	16·8	16·5	16·3	16·0	15·5	15·2	15·4	15·4	15·4	15·6	15·6	15·6	15·3	14·5	13·1	12·8	13·0	15·0	16·1
November	16·7	18·5	19·8	19·6	19·3	18·3	17·0	16·2	15·8	15·7	15·3	15·0	14·9	15·1	15·1	15·3	15·2	15·2	14·6	13·5	11·9	11·3	11·9	14·5	15·7
December	17·2	19·9	20·9	21·0	20·5	19·2	18·0	17·0	16·5	16·2	16·1	16·0	15·8	15·9	15·8	15·8	15·8	15·5	14·8	13·2	12·1	11·9	13·2	15·4	16·4
Means ..	15·2	17·0	18·1	18·2	17·6	16·6	15·9	15·6	15·3	15·0	14·8	14·6	14·6	14·7	14·7	14·8	14·9	14·9	14·6	14·0	13·2	12·7	12·6	13·6	15·1
Horizontal Force: 0·22 . . . C.G.S.																									
January	706	708	713	718	721	724	724	724	724	725	725	724	723	721	721	720	720	722	723	721	720	713	708	705	719
February	685	693	701	706	710	711	712	710	710	709	709	708	708	708	707	707	707	708	707	705	698	688	680	680	703
March	677	685	692	700	705	708	707	709	708	710	708	708	708	708	708	707	708	708	709	708	702	693	681	675	701
April	678	683	689	694	697	697	697	699	699	697	697	699	697	698	698	698	699	699	700	701	699	693	687	681	695
May	694	690	691	695	699	703	703	703	703	703	703	703	703	703	703	703	704	705	706	707	707	706	703	698	702
June	696	692	691	692	696	700	701	700	699	698	698	698	697	698	698	699	699	700	701	702	703	705	704	701	698
July	693	685	685	688	695	699	700	699	698	697	696	697	698	698	699	699	699	701	702	703	705	707	707	701	698
August	685	681	680	683	688	692	693	694	693	691	692	691	691	691	692	692	692	693	695	696	698	699	697	692	691
September	676	677	683	688	692	694	694	694	693	693	691	692	689	693	692	692	693	695	696	698	697	692	685	679	690
October	672	681	688	694	697	695	693	691	690	690	689	688	689	689	690	690	691	693	694	693	688	679	670	667	687
November	653	665	675	683	687	685	682	678	679	679	678	678	677	677	677	677	678	678	680	680	672	662	652	650	674
December	651	662	673	683	687	688	683	680	678	678	678	677	676	675	674	673	673	676	677	674	667	655	647	646	672
Means ..	680	683	688	694	697	700	699	698	698	697	697	697	696	696	696	696	697	698	699	699	696	691	685	681	694

Table of Hourly Means for Months—1902—*continued.*

Vertical Force : 0·55 . . . C.G.S.

Month.	0h.	1h.	2h.	3h.	4h.	5h.	6h.	7h.	8h.	9h.	10h.	11h.	12h.	13h.	14h.	15h.	16h.	17h.	18h.	19h.	20h.	21h.	22h.	23h.	Mean.
	Min.	Min.	Min.	Min.	Min.	Min.	Min.	Min.	Min.	Min.	Min.	Min.	Min.	Min.	Min.	Min.	Min.	Min.	Min.	Min.	Min.	Min.	Min.	Min.	Min.
January	293	294	294	295	296	296	296	297	297	297	296	296	297	296	296	296	296	296	296	296	296	296	296	294	296
February	269	268	269	269	270	270	271	271	270	271	270	270	270	270	270	270	269	270	270	270	271	271	271	269	270
March	280	279	279	279	279	275	281	282	282	282	282	283	283	282	281	281	281	281	281	281	282	282	283	281	281
April	265	265	265	265	265	266	266	267	266	266	266	266	266	266	265	266	265	265	265	265	266	266	266	265	266
May	282	282	282	283	283	284	283	284	284	284	284	283	283	283	283	283	282	282	282	282	282	282	282	282	283
June	286	286	287	287	287	287	287	287	287	287	288	288	287	287	287	287	287	287	287	287	287	286	286	286	287
July	275	276	277	277	277	278	278	278	277	277	277	277	277	274	277	277	276	275	276	273	276	275	275	275	276
August	271	271	271	272	272	272	272	272	272	272	272	272	272	271	271	271	271	271	271	271	271	270	268	271	271
September	286	287	287	287	288	288	289	289	289	289	289	289	289	289	288	288	288	288	288	288	288	288	287	286	288
October	289	291	291	292	293	294	295	295	295	295	295	294	294	294	294	293	293	293	293	293	293	293	294	293	293
November	259	259	259	259	260	261	261	262	261	261	261	261	261	261	261	261	261	261	261	261	261	261	261	260	261
December	251	251	250	251	252	253	254	254	254	254	254	254	254	254	253	254	253	254	254	254	254	254	254	252	253
Means ..	275	276	276	276	277	277	278	278	278	278	278	278	278	277	277	277	277	277	277	277	277	277	277	276	277

Table of Hourly Means for Months—1903.

Declination (east of north) : 16° . . .′

Month.	0h.	1h.	2h.	3h.	4h.	5h.	6h.	7h.	8h.	9h.	10h.	11h.	12h.	13h.	14h.	15h.	16h.	17h.	18h.	19h.	20h.	21h.	22h.	23h.	Mean.
	Min.	Min.	Min.	Min.	Min.	Min.	Min.	Min.	Min.	Min.	Min.	Min.	Min.	Min.	Min.	Min.	Min.	Min.	Min.	Min.	Min.	Min.	Min.	Min.	Min.
January	17·1	19·1	20·1	20·5	19·8	19·2	18·6	18·1	17·6	17·3	17·1	16·9	16·7	16·4	16·3	16·3	16·0	16·0	15·5	14·5	13·6	13·0	13·6	15·2	16·9
February	16·9	18·9	20·4	20·6	19·8	19·0	18·2	17·5	17·0	16·7	16·4	16·1	16·1	16·2	16·1	16·2	16·1	16·3	15·8	14·9	14·6	13·1	13·8	15·2	16·7
March	18·0	20·1	21·1	21·2	20·2	18·7	17·9	17·8	17·5	17·2	17·0	16·8	16·6	16·8	16·7	16·8	16·9	16·8	16·7	16·0	15·0	13·8	13·9	15·6	17·3
April	17·6	20·1	21·4	21·5	20·5	19·4	18·6	18·0	17·8	17·4	17·0	17·0	16·8	16·8	17·1	17·5	17·6	17·5	17·5	17·3	16·5	15·5	14·7	15·4	17·8
May	17·8	19·3	20·1	20·2	19·6	18·6	18·4	18·1	17·9	17·5	17·1	16·8	17·1	17·3	17·5	17·8	17·8	17·9	17·7	17·5	17·3	16·9	16·6	16·8	17·9
June	17·7	19·0	19·9	19·9	19·6	19·9	17·7	18·0	17·6	17·3	17·3	17·2	17·1	17·1	17·5	17·6	17·9	17·8	18·0	17·9	18·2	18·0	17·4	17·3	18·0
July	17·5	18·8	20·4	20·7	20·2	18·8	18·4	18·2	18·0	17·9	17·4	17·3	17·6	17·6	17·6	18·3	18·3	18·5	18·6	18·4	18·5	18·2	17·4	16·9	18·3
August	17·8	19·5	21·0	21·5	21·2	19·8	19·3	19·1	18·5	18·0	17·9	17·7	17·4	17·6	17·8	18·4	18·7	18·9	18·9	18·8	18·5	17·8	16·9	16·7	18·7
September	18·2	20·2	21·5	22·1	21·6	20·7	19·7	18·9	18·8	18·4	18·0	17·7	17·9	18·2	18·6	18·8	19·3	19·3	19·1	19·0	18·0	16·7	16·0	16·4	18·9
October	20·1	22·2	23·6	23·8	23·0	21·6	20·8	20·1	19·2	18·3	18·5	17·5	19·5	16·8	18·1	16·5	17·4	18·9	19·4	18·3	17·6	16·4	16·6	17·8	19·3
November	19·8	22·4	23·9	23·9	23·4	22·5	21·2	19·9	19·6	19·1	18·2	18·2	18·3	18·2	18·2	18·4	18·4	18·2	17·4	16·0	15·2	14·5	15·1	17·2	19·0
December	20·6	23·4	25·2	26·1	25·6	24·6	23·2	21·6	21·2	21·0	20·2	19·7	19·7	19·8	19·7	19·7	19·9	20·0	19·4	18·1	16·5	15·5	15·7	17·7	20·6
Means ..	18·3	20·2	21·5	21·9	21·2	20·2	19·3	18·8	18·4	18·0	17·7	17·4	17·6	17·4	17·6	17·7	17·9	18·0	17·8	17·2	16·6	15·8	15·6	16·5	18·3

TABLE OF HOURLY MEANS FOR MONTHS—1903—*continued.*

Month.	0h.	1h.	2h.	3h.	4h.	5h.	6h.	7h.	8h.	9h.	10h.	11h.	12h.	13h.	14h.	15h.	16h.	17h.	18h.	19h.	20h.	21h.	22h.	23h.	Mean.
Horizontal Force 0·22 . . . C.G.S.																									
	Min.	Min.	Min.	Min.	Min.	Min.	Min.	Min.	Min.	Min.	Min.	Min.	Min.	Min.	Min.	Min.	Min.	Min.	Min.	Min.	Min.	Min.	Min.	Min.	Min.
January	666	671	675	682	688	691	691	691	688	688	687	687	687	687	686	686	685	685	681	683	680	674	669	665	682
February	656	664	670	676	680	683	682	681	681	682	682	680	681	680	679	679	679	680	681	678	671	662	654	652	675
March	654	662	670	676	677	679	679	680	681	681	681	680	680	681	680	680	681	681	682	678	677	670	661	656	675
April	647	651	658	664	666	667	669	671	671	672	672	669	671	670	670	670	671	672	673	674	672	666	657	648	666
May	667	669	670	672	674	677	678	678	678	679	679	680	679	680	680	680	681	682	683	683	684	683	680	669	678
June	677	675	673	674	679	683	681	682	679	682	681	681	688	682	682	681	682	683	685	685	681	687	685	681	681
July	670	664	664	667	671	675	676	675	675	675	675	673	674	675	675	675	676	677	677	679	681	684	683	676	675
August	667	663	664	665	668	675	676	677	675	674	672	672	674	675	673	674	674	676	677	678	681	682	678	673	673
September	654	652	657	664	669	672	671	672	670	669	669	674	674	671	671	671	671	673	674	674	674	670	664	657	668
October	643	649	652	664	667	664	664	669	664	659	661	660	663	664	665	665	663	665	665	662	658	650	640	643	659
November	617	630	638	645	652	648	645	643	644	643	644	643	645	646	643	642	642	643	646	642	634	623	615	611	638
December	627	639	650	664	672	672	669	666	660	660	659	659	656	657	656	656	658	658	660	657	650	641	631	624	654
Means . .	654	657	662	668	672	674	673	674	672	672	672	671	673	672	672	672	672	673	674	673	670	666	660	655	669
Vertical Force : 0·55 . . . C.G.S.																									
January	286	286	286	287	287	288	285	288	288	288	288	288	288	288	287	287	287	287	287	289	287	287	286	286	287
February	287	286	286	287	288	288	288	288	288	288	288	288	288	288	287	287	287	287	287	287	288	288	287	287	287
March	274	274	274	274	275	276	276	276	276	276	276	276	276	276	276	275	275	275	275	275	276	276	276	275	275
April	274	273	273	273	274	275	275	275	275	275	275	275	275	275	275	275	275	274	274	275	275	275	275	274	275
May	300	300	301	301	302	302	302	302	302	302	302	302	302	302	302	301	301	301	301	301	301	301	301	300	301
June	291	291	292	293	293	293	293	294	294	293	294	293	293	293	293	292	292	293	292	293	292	292	292	291	293
July	276	276	277	277	278	278	278	278	278	278	278	278	278	278	277	277	277	277	277	277	276	276	276	276	277
August	293	294	294	295	295	295	296	296	296	296	296	296	296	295	295	295	295	295	295	295	294	291	294	294	295
September	292	292	293	293	293	294	294	294	294	295	294	294	294	294	294	293	293	293	293	293	293	293	293	293	293
October	288	287	287	288	289	290	291	291	291	290	289	287	291	290	290	290	285	290	290	287	289	290	289	289	288
November	282	281	282	284	283	283	284	284	285	284	284	284	283	283	282	282	282	283	282	283	284	281	284	282	283
December	276	276	276	276	277	280	281	282	282	282	281	281	281	281	281	280	280	280	280	280	280	280	281	279	280
Means . .	285	285	285	286	286	287	287	287	287	287	287	287	287	287	287	286	286	286	286	286	286	286	286	285	286

Table of Hourly Means for Months—1904.

Month.	0h.	1h.	2h.	3h.	4h.	5h.	6h.	7h.	8h.	9h.	10h.	11h.	12h.	13h.	14h.	15h.	16h.	17h.	18h.	19h.	20h.	21h.	22h.	23h.	Mean.
Declination (east of north) : 16° + . . .′																									
	Min.	Min.	Min.	Min.	Min.	Min.	Min.	Min.	Min.	Min.	Min.	Min.	Min.	Min.	Min.	Min.	Min.	Min.	Min.	Min.	Min.	Min.	Min.	Min.	Min.
January	21·7	24·2	25·0	24·9	24·1	23·3	22·8	22·2	21·7	21·2	20·8	20·4	20·2	20·4	20·2	20·0	20·5	20·1	19·3	18·2	16·8	16·3	17·3	19·4	20·9
February	21·5	23·9	25·3	25·4	24·4	23·2	22·3	21·5	21·5	21·1	20·5	20·4	20·4	20·2	20·2	20·3	20·4	20·3	20·1	18·7	17·2	16·1	16·5	18·9	20·8
March	21·3	23·6	24·9	25·0	24·4	22·9	22·3	22·0	21·4	20·8	20·7	20·6	20·5	20·5	20·5	20·6	20·5	20·6	20·5	19·9	18·7	17·4	16·7	18·8	21·0
April	22·2	24·4	25·6	25·7	24·8	23·8	23·0	22·3	22·2	21·5	21·0	20·9	20·6	21·0	20·9	21·5	21·8	21·7	21·6	21·2	20·9	20·0	19·6	20·3	22·0
May	20·3	22·0	23·3	23·3	22·6	21·6	20·8	20·5	19·7	19·1	19·4	19·1	19·0	18·8	18·9	19·8	20·1	20·4	20·4	20·2	19·9	19·7	19·2	19·3	20·3
June	20·5	21·8	22·7	23·2	22·8	21·7	21·1	21·0	20·9	20·7	20·0	19·6	19·4	19·9	20·1	20·4	20·7	20·8	20·7	20·8	20·8	20·5	19·9	19·8	20·8
July	20·7	22·1	23·4	23·9	23·5	22·5	21·6	21·7	21·6	21·3	20·8	20·6	20·5	20·6	20·9	21·2	21·5	21·6	21·5	21·3	21·4	21·3	20·5	20·1	21·5
August	20·9	22·8	24·3	25·1	25·1	24·2	23·2	23·0	22·7	22·6	22·2	22·2	21·4	21·4	21·7	21·8	22·2	22·0	22·1	22·1	21·6	20·7	19·6	19·4	22·2
September	21·2	23·6	25·3	26·2	25·9	25·0	23·8	23·2	22·7	22·4	21·9	21·7	21·6	21·5	21·9	22·3	22·6	22·5	22·4	22·1	21·1	19·6	18·5	19·0	22·4
October	23·5	26·0	27·7	27·8	26·8	25·6	24·3	23·4	23·1	22·8	22·5	22·1	21·9	21·8	22·0	22·0	22·3	22·6	22·0	20·6	18·8	17·8	18·2	20·5	22·7
November	24·0	26·9	29·0	29·0	28·1	26·9	25·4	24·2	23·7	23·1	22·4	22·4	22·1	22·0	21·9	22·4	22·8	22·7	22·0	20·1	18·2	17·0	17·9	20·6	23·1
December	24·4	27·2	28·9	29·6	28·9	27·6	26·0	24·8	24·0	23·9	23·4	23·1	22·9	22·8	22·9	23·0	23·1	22·5	21·6	20·0	18·3	17·4	18·4	20·9	23·6
Means . .	21·8	24·0	25·4	25·8	25·1	24·0	23·0	22·5	22·1	21·7	21·3	21·1	20·9	20·9	21·0	21·3	21·5	21·5	21·2	20·4	19·5	18·6	18·5	19·7	21·8
Horizontal Force : 0·22 . . . C.G.S.																									
January	623	634	645	655	658	663	660	658	657	655	657	656	654	654	653	654	653	655	653	650	642	630	626	619	648
February	624	632	642	650	657	657	657	654	654	654	656	655	656	657	653	652	652	652	653	652	642	633	623	618	647
March	634	638	644	651	657	659	657	657	659	658	659	657	658	658	658	657	658	657	658	657	653	646	638	635	653
April	613	615	620	627	633	634	636	638	638	637	637	639	638	637	640	639	639	642	645	644	640	633	625	616	634
May	626	626	630	632	635	639	639	640	633	635	638	637	637	637	640	639	640	642	643	644	645	642	637	624	637
June	643	639	638	642	648	653	653	653	653	652	652	650	649	650	651	651	653	653	654	655	656	658	656	651	651
July	641	636	635	640	646	651	651	651	650	650	650	650	649	649	650	650	650	650	653	656	657	659	656	650	649
August	637	631	632	638	643	648	651	650	649	650	650	651	650	650	652	651	651	653	653	654	656	656	651	643	648
September	629	628	630	635	642	645	647	648	649	648	648	649	650	649	650	649	650	652	652	654	655	651	646	636	646
October	615	622	634	645	652	650	649	647	647	645	647	644	644	646	644	645	646	648	650	647	640	630	620	614	640
November	608	618	637	649	655	657	652	650	647	644	645	644	644	643	642	642	643	643	645	644	636	623	609	603	638
December	615	627	641	654	664	662	658	653	652	651	650	648	648	648	646	645	645	647	648	646	636	623	612	606	643
Means . .	626	629	636	643	649	651	651	650	649	648	649	648	648	648	648	648	648	649	651	650	646	640	633	626	644

TABLE OF HOURLY MEANS FOR MONTHS—1904—*continued*.

Month.	0h.	1h.	2h.	3h.	4h.	5h.	6h.	7h.	8h.	9h.	10h.	11h.	12h.	13h.	14h.	15h.	16h.	17h.	18h.	19h.	20h.	21h.	22h.	23h.	Mean.
	Vertical Force : 0·55 . . . C.G.S.																								
	Min.	Min.	Min.	Min.	Min.	Min.	Min;	Min.	Min.	Min.	Min.	Min.	Min.	Min.	Min.	Min.	Min.	Min.	Min.	Min.	Min.	Min.	Min.	Min.	Min.
January	271	270	269	270	271	273	274	275	275	275	274	274	273	273	273	273	273	272	272	273	273	272	272	272	273
February	296	295	296	296	297	298	300	300	300	300	300	299	299	299	298	298	298	298	298	299	299	300	299	297	298
March	293	292	294	295	295	297	296	297	297	297	297	297	296	296	296	296	295	296	296	296	297	296	297	295	296
April	289	289	289	290	291	292	292	292	292	292	292	292	291	291	290	291	290	290	290	290	291	291	291	290	291
May	304	303	304	305	305	305	306	306	306	306	306	306	306	306	305	305	305	304	305	305	305	305	305	304	305
June	308	308	308	309	309	309	309	310	310	310	310	310	310	309	309	309	309	309	309	309	309	308	308	308	309
July	313	313	313	313	314	314	314	314	315	315	315	315	315	314	314	314	314	314	314	314	313	313	313	313	314
August	316	315	316	316	316	317	317	318	318	318	318	318	318	318	317	317	317	316	316	317	316	316	317	315	317
September	325	325	325	325	325	326	326	327	327	327	327	327	326	326	326	326	325	326	326	326	326	326	325	325	326
October	313	313	312	313	314	316	316	316	316	316	316	316	316	316	315	315	315	315	315	315	316	316	316	314	315
November	322	321	321	322	322	323	324	324	324	324	324	324	323	323	322	322	322	322	323	323	324	325	324	323	323
December	322	320	319	319	321	323	324	325	325	324	324	325	324	324	324	324	324	324	324	324	324	325	324	322	323
Means ..	306	305	305	306	307	308	308	309	309	309	309	308	308	308	307	307	307	307	307	308	308	308	308	306	307

APPENDIX VII.

REPORT OF THE SURVEYORS BOARD.

The Board for 1913 consists of Mr. James Mackenzie, Surveyor-General *ex officio;* Mr. Thomas Humphries, Lower Hutt, President of the Institute of Surveyors, Wellington, and Mr. E. H. Wilmot, Chief Surveyor, Dunedin, nominated by the Hon. the Minister of Lands; Mr. H. Sladden, Vice-President of the Institute of Surveyors, Wellington, and Mr. J. W. Harrison, Vice-President of the Institute of Surveyors, Auckland, nominated by the Council of the Institute of Surveyors. At the first meeting of the Board in 1913 Mr. James Mackenzie was elected Chairman.

The Board, acting in conjunction with the six Australian Surveyors Boards, conducted examinations of candidates for surveyors' licenses in September, 1912, and March, 1913.

At the September examination thirty-five candidates sat. Of these Mr. Frederick Norman Thompson, Public Works Department, passed the examination with credit, obtaining over 80 per cent. of the maximum marks; Mr. John Asher Parry, Auckland, and Mr. Ronald Francis Wilson Mackenzie, Lands and Survey Department, passed the whole examination; while Mr. Percy Russell Wilkinson, Lands and Survey Department; Mr. Gordon Pearson Parkinson, Christchurch; Mr. Archibald Wilson Craig, Lands and Survey Department; Mr. Harry Lawrence Fendall, Auckland; Mr. William Roderick Hayes, Auckland; Mr. Philip Corliss Gannaway, Lands and Survey Department, Auckland; Mr. Louis Pieters Swarbrick, Hamilton; Mr. John McKinlay, Dunedin; Mr. Tristram James Havelock Speedy, Auckland; Mr. George Moore Ross Jackson, Lands and Survey Department; Mr. Joseph Charles Simmonds, B.Sc., Auckland; Mr. Charles Kirkpatrick Grierson, Auckland; Mr. Frank Rupert Burnley, Lands and Survey Department; and Mr. Roy McEwan, Napier, completed the examination, having passed in some of the subjects at a former examination.

At the March examination seventeen candidates sat. Of these, Mr. Frederick William Watson and Mr. George Pirrit, Lands and Survey Department, passed the whole examination; while Mr. John Edward Anderson, Public Works Department, Mr. Henry John Gould, Dunedin, and Mr. Felix Herbert Waters, Lands and Survey Department, completed the examination, having passed in some of the subjects at a former examination.

The papers for the September examination were set by the New South Wales Board, while those for the March examination were set by the Queensland Board, and the papers for the forthcoming examination in September will be set by this Board.

The Board has been engaged on the revision of the Examination Regulations, and it is hoped to have the new regulations gazetted and issued soon.

The Board extended the time of sitting for examination from March to September, 1912, for those candidates who had commenced service before 1908. The resolutions passed at the Conference of the Director of Commonwealth Lands and Surveys, the Surveyor-General and the Government Astronomer of New Zealand, and the Surveyors-General of the States of the Commonwealth of Australia, which met at Parliament House, Melbourne, on Monday, 20th May, 1912, were discussed by the Board. The Chairman gave a résumé of the proceedings at the Conference, and said he could not help feeling that the representatives from New Zealand had been the means of contributing towards the good results accruing from the deliberations. He intimated that as a result of the Conference the Prime Minister of the Commonwealth stated that he would provide the sum of £6,000 on the 1912–13 estimates towards the cost of the geodetic survey of Australia.

The list of licensed surveyors as at 1st January, 1913, containing 473 names, was published in the *New Zealand Gazette* on the 30th January, 1913, and copies of the list are obtainable from the Board. A new feature of the list this year is that members of the Surveyors' Institute are indicated on it.

The Board records with regret the deaths of the following surveyors reported during the year: Francis Simpson, New Plymouth; Edwin James Campion, Gisborne; John Reay Mackay, Stratford.

Since September, 1902, no less than 147 candidates have entered for the examination, and of this total 132 have passed.

Mr. A. C. Turnbull, Chief Accountant, Lands and Survey Department, was appointed Auditor of the Board's accounts.

Printed lists of licensed surveyors and examination regulations and Acts were received from most of the States of the Commonwealth of Australia.

During the year two recess committee meetings and nine Board meetings were held.

James Mackenzie, Chairman.
C. E. Adams, Secretary.

Wellington, 31st March, 1913.

C. E. ADAMS, M.Sc., F.R.A.S.,
Government Astronomer,
Secretary.

H. SLADDEN,
Vice-President, N.Z. Institute of
Surveyors, Wellington.

T. N. BRODRICK,
Chief Surveyor, Wellington.

T. HUMPHRIES,
President, N.Z. Institute of Surveyors,
Wellington.

JAMES MACKENZIE,
Surveyor-General, Chairman.

J. W. HARRISON,
Vice-President, N.Z. Institute of Surveyors,
Auckland.

THE SURVEYORS' BOARD OF EXAMINERS, 1912–13.

NOTE.—On the present Board Mr. E. H. Wilmot, Chief Surveyor, Dunedin, takes the place of Mr. T. N. Brodrick, Wellington.

E. M. SMITH,
Surveyor-General, South Australia.

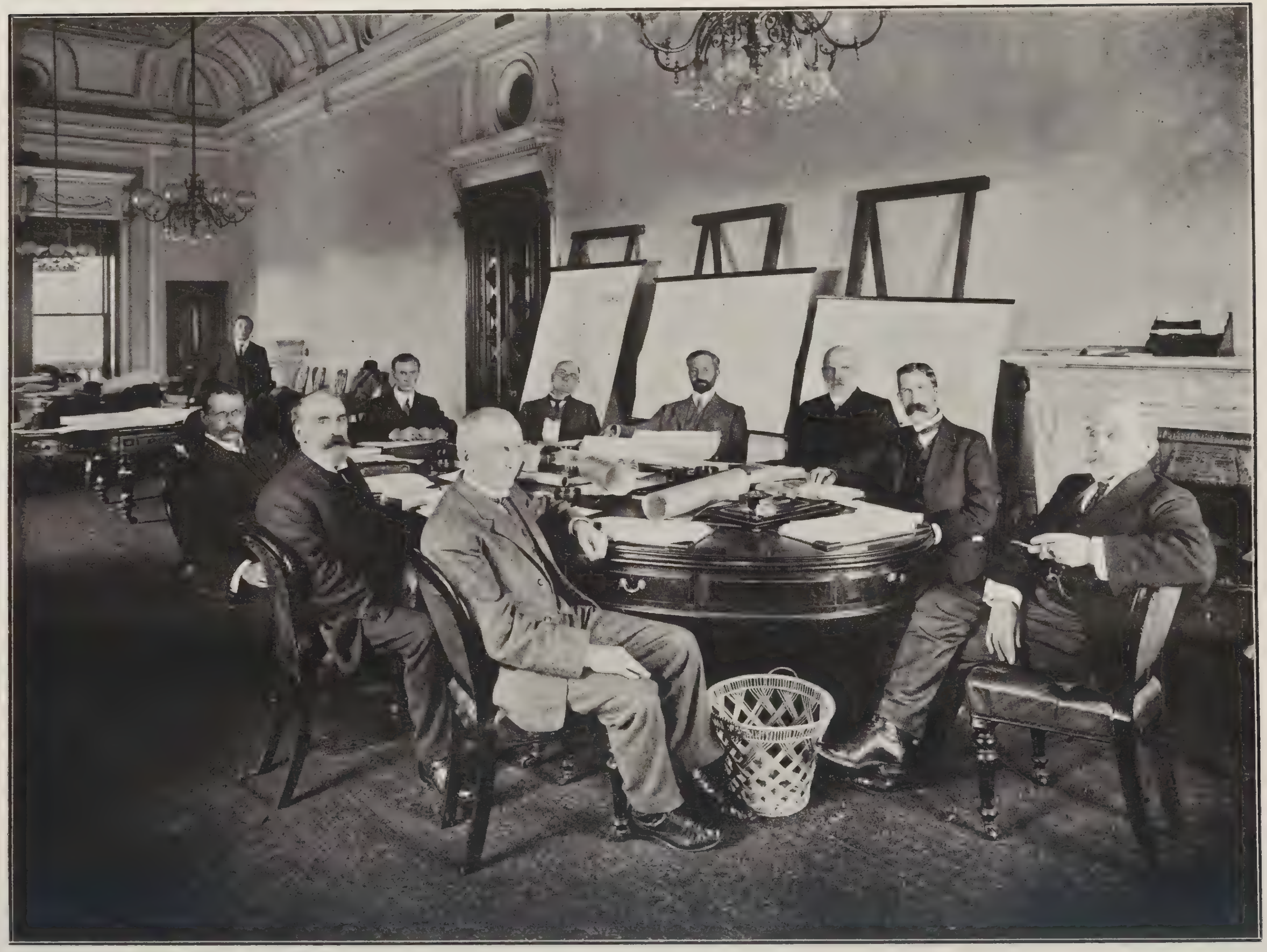
JAMES MACKENZIE,
Surveyor-General, New Zealand.

C. SEDDON,
Clerk.

H. E. FINNEY,
Secretary.

C. E. ADAMS,
Government Astronomer,
New Zealand.

CHARLES ROBERT SCRIVENER,
Director of Commonwealth
Lands and Survey.



ALLAN A. SPOWERS,
Surveyor-General,
Queensland.

FREDERICK POATE,
Surveyor-General,
New South Wales.

E. A. COUNSEL,
Surveyor-General and
Secretary for Lands,
Tasmania.

J. M. REED, Chairman,
Surveyor-General,
Victoria.

THE CONFERENCE OF SURVEYORS-GENERAL IN SESSION AT PARLIAMENT HOUSE, MELBOURNE, 25TH MAY, 1912.

APPENDIX VIII.

EXTRACTS FROM THE REPORT OF THE CONFERENCE OF THE DIRECTOR OF COMMONWEALTH LANDS AND SURVEYS, THE SURVEYOR-GENERAL AND THE GOVERNMENT ASTRONOMER OF NEW ZEALAND, AND THE SURVEYORS-GENERAL OF THE STATES OF THE COMMONWEALTH OF AUSTRALIA.

The Conference met at Parliament House, Melbourne, at 11·30 a.m., on Monday, 20th May, 1912, and the following representatives were present:—

Commonwealth of Australia	Charles Robert Scrivener, Esquire, Director of Commonwealth Lands and Surveys.
Dominion of New Zealand	James Mackenzie, Esquire, Surveyor-General. Charles Edward Adams, Esquire, M.Sc., F.R.A.S., Government Astronomer.
State of New South Wales	Frederick Poate, Esquire, Surveyor-General.
,, Victoria	Joseph Martin Reed, Esquire, I.S.O., Surveyor-General.
.. Queensland	Allan Alfred Spowers, Esquire, Surveyor-General.
.. South Australia	Edwin Mitchell Smith, Esquire, Surveyor-General.
.. Tasmania	Edward Albert Counsel, Esquire, Surveyor-General and Secretary for Lands.

The Surveyor-General of Victoria having been elected Chairman, the Conference was formally opened by the Honourable King O'Malley, Minister of State for Home Affairs, who said, "I cannot tell you how pleased I am to welcome you on behalf of the Commonwealth Government—you who have so much to do with the ultimate progress and prosperity of Australia, and who have met here for the purpose of discussing matters of great importance to the Commonwealth, and of peculiar interest to the Lands and Survey Branch of my Department. I give a special welcome to the representatives of the Dominion of New Zealand, Mr. Mackenzie, the Surveyor-General, and Mr. Adams, the Astronomer, who have come so far to take part in this Conference. I am very pleased indeed to have a Conference between the Surveyors-General of the States and of the Dominion of New Zealand, and the Director of Commonwealth Lands and Surveys, with the object of advising me as to the best method to be adopted to secure the fullest measure of reciprocity and those harmonious relations between the States, the Dominion, and the Commonwealth upon matters of common interest which we all desire. I have much pleasure in declaring this Conference open."

The Chairman acknowledged the kindly welcome extended by the Minister, and expressed the hope that the deliberations of the Conference would prove in every way satisfactory.

REPORT.

To the Hon. the Minister of State for Home Affairs.

Sir,— Melbourne, 25th May, 1912.

In response to your invitation, the Surveyors-General of all the States except Western Australia, the Surveyor-General and the Government Astronomer of New Zealand met in conference with the Director of Commonwealth Lands and Surveys at the Federal Parliament House on Monday, the 20th May, 1912.

After the election of the Surveyor-General of Victoria as Chairman, the members of the Conference having been cordially welcomed by the Minister for Home Affairs, entered upon their duties.

Each subject submitted has received our earnest consideration, and we hope and believe that the resolutions, all unanimously adopted (a copy of which accompanies this report), will, if carried into effect, prove of distinct benefit both to the Commonwealth as a whole and to the States individually.

Regarding the geodetic survey, though this will entail expenditure by the Commonwealth, experience extending over the last twenty years shows that the cost of the primary work is about one-fifteenth of a penny per acre, and we are convinced that any outlay involved in the carrying-out of this survey is amply justified.

The proposed contribution by the Commonwealth towards the preparation of an international map of the world is a recognition of Australia's obligation to take part in a matter of world-wide interest.

The cordial relations that have existed between the members of this Conference, and the results attained, are evidence of the advantages that accrue from the association of representatives of the Commonwealth, the Dominion, and the States; and the interchange of views between those whose experience covers so wide a range must be advantageous, and in the interests of all concerned.

We respectfully recommend for your favourable consideration these resolutions, with the assurance that they have been exhaustively discussed, and that, in framing them, this Conference desires only to assist in the advancement of the interests of Australia.

We have, &c.,
J. M. Reed,
James Mackenzie,
Fred. Poate,
Allan A. Spowers,
E. A. Counsel,
E. M. Smith,
C. E. Adams,
Charles Robt. Scrivener.

RESOLUTIONS.

Subjects of Agenda Paper.	Resolutions agreed upon.
1. Geodetic survey of Australia.	1. That a geodetic survey of Australia should be undertaken. 2. That, in order to give effect to the foregoing resolution, this Conference respectfully recommends that such survey be undertaken by the Commonwealth Government, and submits in support thereof the following reasons:— (*a.*) That the time has arrived when the Commonwealth should take its place in the scientific investigations of the world, not the least important of which are the determination of the figure of the earth, its density, and other cognate matters. (*b.*) That work of this character, involving the highest form of survey, should be effected under the supreme authority of Australia, as it is essential that it should be carried out with the greatest degree of accuracy on a uniform basis and a definite plan, the individual parts being co-ordinated and eventually forming one homogeneous whole. (*c.*) That the system which has hitherto prevailed by which the individual States carried out this work with instruments of varying character has resulted in divergent standards of accuracy, rendering the work, to a great extent, unsatisfactory, and, though much of it is of high grade, portions of it are impossible of reconciliation and co-ordination with a continental scheme. (*d.*) That the disirableness of this work being undertaken by the Commonwealth Government is evidenced by the fact that the geodetic survey of the United States is carried out under the direct control of the Federal Government, and that the South African geodetic survey is also under one central control. (*e.*) That such survey is absolutely necessary for the production of accurate maps, will be of high value in connection with cadastral and geological surveys, and form a basis for topographical work for defence and other purposes. It will, moreover, provide a standard of accuracy for surveys of every description throughout the Commonwealth. (*f.*) That it will afford an invaluable base to which settlement surveys already effected can be connected, providing data for re-establishing boundaries, which, with increasing density of settlement, becomes a matter of great importance. Further, as regards the sparsely occupied areas of Australia, such a survey, if carried out in advance of settlement, will be of the greatest utility and assistance in effecting the settlement surveys which can, at any future time, be reproduced with a minimum error, and at a relatively low cost, preventing litigation, consequent upon other methods. 3. That the geodetic survey referred to in the resolutions submitted by the Committee shall embrace the geodetic and major triangulation only. 4. That, in view of the precision with which the base lines of New Zealand have been measured, it is desirable that the New Zealand survey should be brought into line with the geodetic surveys of the world by the use of instruments capable of carrying out the angular work with an equal degree of accuracy, and so that the present trigonometrical survey may be strengthened by a series of main triangles.
2. Revision of the map of Australia, now in course of preparation, with regard principally to the nomenclature.	1. (*a.*) That the proofs of the Commonwealth map of Australia be referred to the respective Surveyors-General for revision, inviting them to confer with the local Geographical Society and marine authorities. Map when revised to be adopted for present use. (*b.*) That, later, the map be referred to the Admiralty and the Royal Geographical Society of England for suggestions. (*c.*) That final review of the map be made by the Committee of the Surveyors-General of the States and the Director of Commonwealth Lands and Surveys.

RESOLUTIONS—*continued.*

Subjects of Agenda Paper.	Resolutions agreed upon.
3. Discussion on the participation of Australia and New Zealand in the production of a map of the world on a scale of 1 in 1,000,000.	1. That the preparation of the portion of the map of the world, embracing the Commonwealth of Australia and the Dominion of New Zealand on a scale of 1 in 1,000,000, is a work that should be undertaken by the Commonwealth and the Dominion of New Zealand. As New Zealand is in a position to do its own portion, this Conference recommends that the work, as regards Australia, should be carried out under the direction of the Commonwealth Government, the respective States being asked to provide all available information.
4. Issue of licenses by the Commonwealth Government and reciprocity between the several States, the Dominion of New Zealand, and the Commonwealth.	1. That this Conference is of opinion that, as soon as the Commonwealth Government gives necessary authority for the creation of a Board of Examiners for Surveyors operating in Commonwealth territory, such Board should be admitted to the reciprocal arrangement now existing between the various States and the Dominion of New Zealand, and recommends that this resolution be referred for the consideration of the reciprocating Boards.
5. Commonwealth Lands Titles Office.	1. That the Surveyors-General would, as far as possible, furnish the Director of Commonwealth Lands and Surveys with information regarding "lands titles" methods in their respective States, and no further action was considered necessary.
6. On the desirableness of uniformity in the declarations made by surveyors on plans of survey under the various Lands Acts and Torrens Act.	1. This Conference recommends (as regards surveys under the Real Property Acts) for the favourable consideration of the Surveyors Boards of the States the form of certificate under the Real Property Acts as expressed in the Authorized Surveyors Declaration for Land Transfer Surveys in New Zealand, viz. :— "I. of , licensed surveyor, do solemnly and sincerely declare that this plan has been made from surveys executed by me (or under my own personal supervision, inspection, and field check), and that both plan and survey are correct, and have been made in accordance with the regulations of the Surveyors Board, dated . "And I make this solemn declaration conscientiously believing the same to be true, and by virtue of the provisions of . "Declared at , &c." No resolution was adopted regarding the form of certificate under the various Lands Acts.
7. The carrying-out of surveys by the several States for the Commonwealth Government.	1. That the procedure to be adopted in connection with such surveys as may be effected by the States for the Commonwealth should be as follows :— (*a.*) That, in order to avoid delay, the Director of Commonwealth Lands and Surveys and the Surveyors-General of the States be authorized to communicate directly with one another in connection with such surveys. (*b.*) That full particulars as to the required surveys should be supplied to the Surveyor-General of the State in which the survey is desired, with a request that the survey should be made. (*c.*) That the Surveyor-General should supply necessary detailed information for the use of the surveyor, and issue requisite instructions. (*d.*) That the surveyor should carry out the survey in accordance with State regulations and supply certified plan and field notes in duplicate. (*e.*) That the State officials should examine the plan, and the Surveyor-General (or other authorized officer) certify in the usual manner, both as to plans and accounts, and then transmit one plan with one copy of field notes to the Director, retaining the other plan and copy of field notes for State record purposes. (*f.*) That the Commonwealth should pay all costs, both field and office.
8. The spelling of names of Australian places.	1. That, in the opinion of this Conference, it is desirable that, as far as practicable, the system of orthography adopted by the Royal Geographical Society, the Colonial and Foreign Service, the Admiralty, and War Office for native names should be adopted, as well as a uniform method of spelling Australian place-names.

DISCUSSION.

GEODETIC SURVEY OF AUSTRALIA.

Mr. MACKENZIE.—In New Zealand it was looked upon as a necessity to have a trigonometrical survey. Mr. J. T. Thomson started the work in the early fifties, and when he became Surveyor-General of New Zealand, in 1876, it was vigorously pushed forward well in advance of settlement. I regard it as impossible to carry out survey work satisfactorily without a trigonometrical survey, and our successive Dominion Governments have always approved of it without question as being the first essential in all settlement operations. It has never been claimed for the New Zealand triangulation that it possesses the high scientific status of the geodetic surveys of other countries, but it has always been practical, and was also sufficiently accurate to govern all classes of detail surveys. The outstanding difference between our Dominion work and that of the Australian States, excepting perhaps South Australia, is that we bring it into everyday use, our reconnaissance and trigonometrical surveys being the real forerunners of settlement, whilst in Australia, though the surveys are often highly scientific, there has been much less practical application, neither have these surveys been a factor in the settlement problem. I cannot help thinking that had New Zealand's way of keeping the practical uses of triangulation more to the front been adopted, Australian legislators would have looked upon the work more kindly, and any resolutions we pass should voice this side of the question.

Mr. SPOWERS.—At the present time there is no trigonometrical vote in Queensland, and only a very small area is covered by the major triangulation, which was carried out about 1890. In addition to other reasons, we are greatly in need of this survey to assist us in the correct compilation of our maps: much time is now lost and expense incurred in endeavouring to make accurate maps from information that is faulty or altogether wanting. We are in the unenviable position of being about the only civilized nation that has not an accurate trigonometrical survey. The work is rightly one for the Commonwealth Government to undertake.

Mr. MACKENZIE.—There is no doubt as to the necessity for it.

The CHAIRMAN.—Victoria is covered to a great extent by triangulation carried out under the direction of Mr. Ellery, but unfortunately settlement preceded that survey and little use has been made of it. Geodetic lines have also been run to afford a check on settlement surveys.

Mr. SMITH.—In South Australia the trigonometrical survey was commenced in 1839, and was continued until 1892. It, to a great extent, preceded settlement, and has been found extremely useful in determining the positions of run-boundaries, and as a check upon settlement surveys.

Mr. COUNSEL.—Triangulation was in Tasmania commenced in 1833, and continued for some years. The major triangulation extended over the greater part of the State. Doubts were expressed as to the accuracy of the survey, which was never connected with the cadastral or block surveys, and it has never been made use of except in the compilation of maps, though some expense has been incurred in establishing new and re-establishing old stations. Much accuracy is claimed for the work.

Mr. POATE.—In New South Wales a geodetic survey has been carried out more or less intermittently since 1867. Last year a 10 in. Repsold theodolite was purchased, and an observer has recently been appointed to continue the survey. Settlement preceded the triangulation, and, as the latter advanced, the ordinary surveys for alienation purposes were connected to it, one result of which was that accurate maps could be produced. I have had a short history of the geodetic survey of New South Wales compiled, which may interest members.

The CHAIRMAN.—Victoria carried out an extensive and accurate triangulation, but the demand for land for settlement was so great that all the surveyors available were required to meet the demand, and settlement surveys were pushed on without being connected with the triangulation. The trigonometrical survey has been of immense value in the compilation of maps and in correcting errors. With regard to the question of a geodetic survey of Australia, there cannot, I think, be two opinions as to the desirableness of it from the scientific standpoint; and, further, it will permit of an accurate determination of the coast-line, and so aid navigation.

Mr. SPOWERS.—It would be useful in connection with defence.

The CHAIRMAN.—Yes.

Mr. SPOWERS.—In all the States topographical information is insufficient.

The CHAIRMAN.—We need, I think, a trigonometrical survey of the whole Continent; it would be of great value in the future.

Mr. SCRIVENER.—The information afforded by such a survey would be available to all the States and would be utilized in their minor work.

The CHAIRMAN.—The Commonwealth would carry out the major triangulation principally.

Mr. SPOWERS.—If the Commonwealth conducts the primary, would it not be better also to do the breaking-down?

Mr. SCRIVENER.—It would be cheaper not to reoccupy stations, but observe both primary and secondary stations at the same time.

Mr. SPOWERS.—That is, if the stations were ready for observation.

Mr. POATE.—Would the States do the breaking-down?

Mr. SPOWERS.—Some would and some would not.

Mr. POATE.—Would it be done with sufficient accuracy by the States?

Mr. SMITH.—It is absolutely necessary that the Commonwealth Government should undertake a trigonometrical survey of the Northern Territory, if only to control surveys for settlement purposes.

Mr. COUNSEL suggested that it would be well, perhaps, that the Commonwealth should only carry out the major triangulation within the States, though he would like to see the whole of the work undertaken by the central authority.

Mr. POATE.—The geodetic survey of Australia would be undertaken by one body, and that body should undoubtedly be the Federal Government, in order that one standard of accuracy should be applied to the whole of the work, and that it should be similar in character to the great geodetic surveys of the world. It should be conducted on similar lines to those adopted in the United States coast survey, and, taking the coast-line first, should be gradually extended inland.

Mr. MACKENZIE urged that after the major triangulation was done, if only in sections, the minor must follow for settlement purposes.

Mr. COUNSEL then moved, and Mr. POATE seconded, the following motion, which was unanimously agreed to: "That, in the opinion of this Conference, it is desirable that a geodetic survey of Australia should be undertaken." It was then determined, "That a committee, comprising Messrs. Poate, Spowers, Mackenzie, and Scrivener, should draft resolutions based upon and giving effect to resolution No. 1."

The Conference proceeded with the discussion on the draft resolutions drawn up by the committee (in support of the motion that a geodetic survey should be undertaken).

The following resolutions were fully discussed, revised, and, on the motion of Mr. POATE, seconded by Mr. SPOWERS, unanimously adopted:—

"That, in order to give effect to the foregoing resolution, this Conference respectfully recommends that such survey be undertaken by the Commonwealth Government, and submits in support thereof the following reasons:—

"(*a.*) That the time has arrived when the Commonwealth should take its place in the scientific investigations of the world, not the least important of which are the determination of the figure of the earth, its density, and other cognate matters.

"(*b.*) That work of this character, involving the highest form of survey, should be effected under the supreme authority of Australia, as it is essential that it should be carried out with the greatest degree of accuracy on a uniform basis and a definite plan, the individual parts being co-ordinated and eventually forming one homogeneous whole.

"(*c.*) That the system which has hitherto prevailed by which the individual States carried out this work with instruments of varying character has resulted in divergent standards of accuracy, rendering the work, to a great extent, unsatisfactory, and, though much of it is of high grade, portions of it are impossible of reconciliation and co-ordination with a continental scheme.

"(*d.*) That the desirableness of this work being undertaken by the Commonwealth Government is evidenced by the fact that the geodetic survey of the United States is carried out under the direct control of the Federal Government, and that the South African geodetic survey is also under one central control.

"(*e.*) That such survey is absolutely necessary for the production of accurate maps, will be of high value in connection with cadastral and geological surveys, and form a basis for topographical work for defence and other purposes. It will, moreover, provide a standard of accuracy for surveys of every description throughout the Commonwealth.

"(*f.*) That it will afford an invaluable base to which settlement surveys already effected can be connected, providing data for re-establishing boundaries, which, with increasing density of settlement, becomes a matter of great importance. Further, as regards the sparsely occupied areas of Australia, such a survey, if carried out in advance of settlement, will be of the greatest utility and assistance in effecting the settlement surveys, which can at any future time be reproduced with a minimum error and at a relatively low cost, preventing litigation consequent upon other methods."

It was moved by Mr. COUNSEL, seconded by Mr. MACKENZIE, and carried unanimously, "That the geodetic survey referred to in the resolutions submitted by the committee shall embrace the geodetic and major triangulation only."

Later, a discussion took place regarding the quality of the angular measurements in the trigonometrical surveys of the States of Australasia and the Dominion of New Zealand, when it appeared that in some of the States and in New Zealand the instruments used were not of the character necessary to attain the precise results demanded in geodetic work, though the triangulation effected in every case is unquestionably of great value in preventing the accumulation of large errors in surveys for alienation purposes and in the production of accurate maps.

TRIANGULATION IN NEW ZEALAND.

[By JAMES MACKENZIE, Esq., Surveyor-General of the Dominion of New Zealand.]

IN order to realize the position of triangulation in New Zealand it is necessary to explain that the Dominion was originally subdivided into six provincial distrcts (afterwards increased to ten), and each carried out its surveys in its own way, under the control of its own Government. These provinces were abolished in 1876, but provincial land districts still remain, the land and survey matters therein being controlled by a combined Commissioner of Crown Lands and Chief Surveyor. There was no attempt at triangulation in the original provinces, except in Otago, Canterbury, Wellington, and Taranaki, and the Native surveys of the North Island.

The great pioneer of accurate survey methods in New Zealand under the Provincial Government was the late Mr. J. T. Thomson, F.R.G.S., then Chief Surveyor of the Province of Otago, who became in 1876 first Surveyor-General of New Zealand, after the establishment of Responsible Government. It was in 1856 that he established a rapid system of reconnaissance survey and a minor triangulation. In this he was ably assisted first by Mr. Alexander Garvey, and later by Mr. James McKerrow, F.R.A.S., who afterwards succeeded Mr. Thomson in the Surveyor-Generalship of the Dominion. Briefly, the process was to observe latitudes at stations about 60 miles apart on the same meridian, and to use the base so obtained for fixing the positions of all prominent mountains and other important features. Regarding Mr. McKerrow's surveys, the country did not lend itself to Mr. Thomson's system of astronomical bases. Mr. McKerrow selected three mountain-peaks, 60 or 70 miles apart, at which the latitude was determined, as also very carefully the times at each place, and by means of chronometers conveyed from point to point the longitude of these base points was ascertained; and, following on this, by ordinary triangulation methods, the topography of the country was filled in.

It may be mentioned that on subsequent close trig. and topographical surveys taking place, the remarkable accuracy of these early reconnaissance surveys, costing as they did only a few shillings per square mile, has been fully demonstrated. The process was extremely rapid, as no stations were built, and was suited to the mountainous nature of the country, while a very fair degree of accuracy was attained. By these means a sufficiently accurate survey of Otago was effected, and used for the first disposal of the early pastoral runs, besides being utilized for many purposes of early settlement, leaving closer detail surveys to follow, as well as the marking-out of electoral, road, registration, and other districts. Information was also afforded of the heights of mountains, passes, lakes, and of distances between geodesical stations.

Minor triangulation followed on this, and was used to check and control all section surveys. The limit of error in traverses then adopted (following Indian practice) was 8 links to the mile, and, as it was desirable that the error on the ground should never exceed 10 links in these early surveys, the minor trig. stations were established at an average distance of 2½ miles apart. Although the permissible error was 8 links to the mile, most of the work when checked showed errors ranging from half a link to 6 links per mile. The maximum error allowed by regulation has since been reduced to 4 links in rural surveys, and 1 link in town surveys; but in actual practice the error rarely exceeds 2 links per mile in rural surveys.

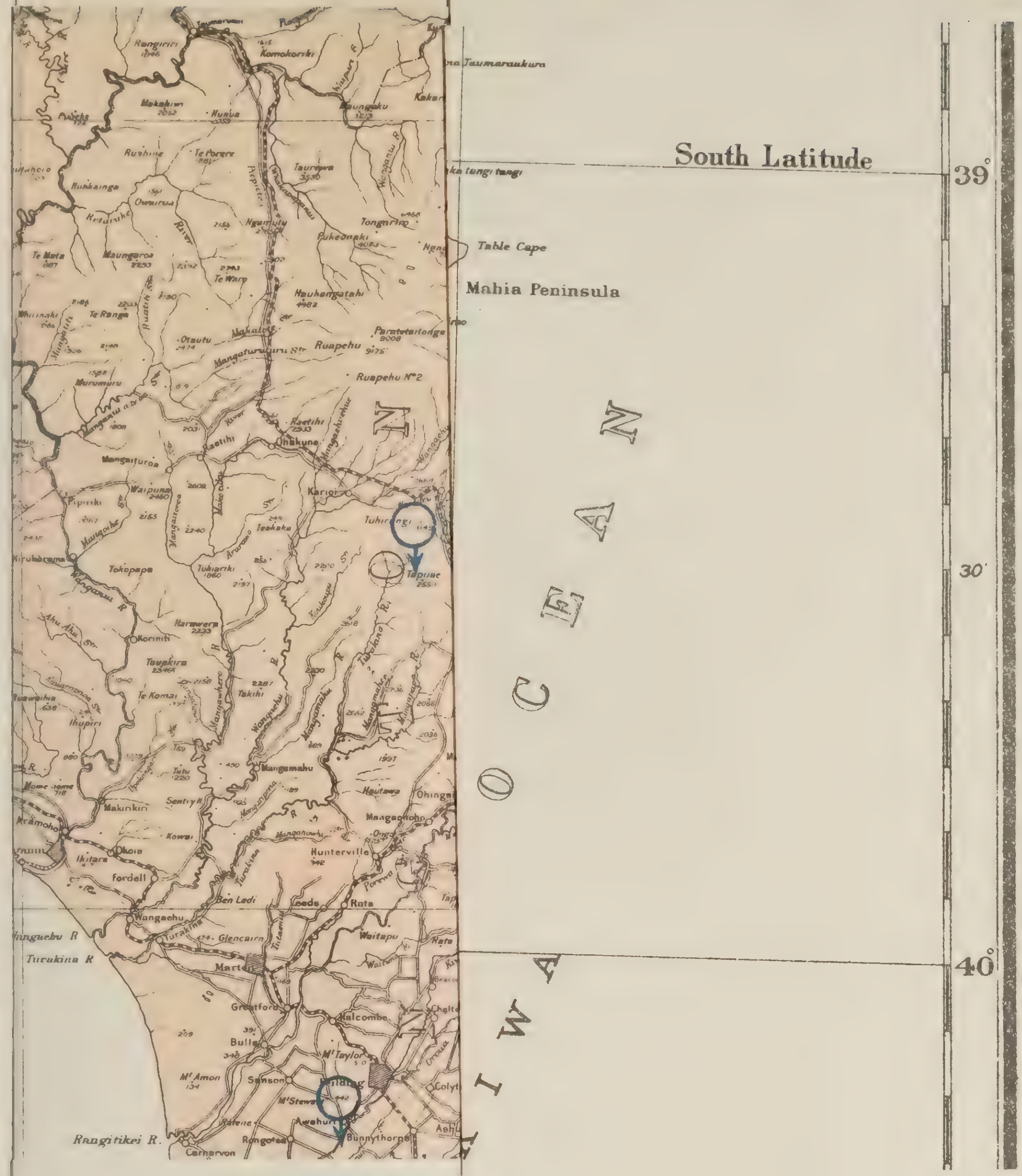
The Province of Otago was divided into meridional circuits of about 120 miles in longitude and 90 miles in latitude; in each circuit the true meridian was observed at the initial station, and a system of standard bearings was extended wherever required, stations being established at intervals of about 12 miles. Each meridional circuit was divided into survey districts, 12 miles square, with sides parallel perpendicular to the initial meridian. Thus each survey district had a geodesical station within it, and a number of carefuly observed standard bearings, so that in the event of settlement surveys being carried out a minor triangulation could at once be put in hand, using the geodesical stations as the initial, and the standard bearings for the true, meridian.

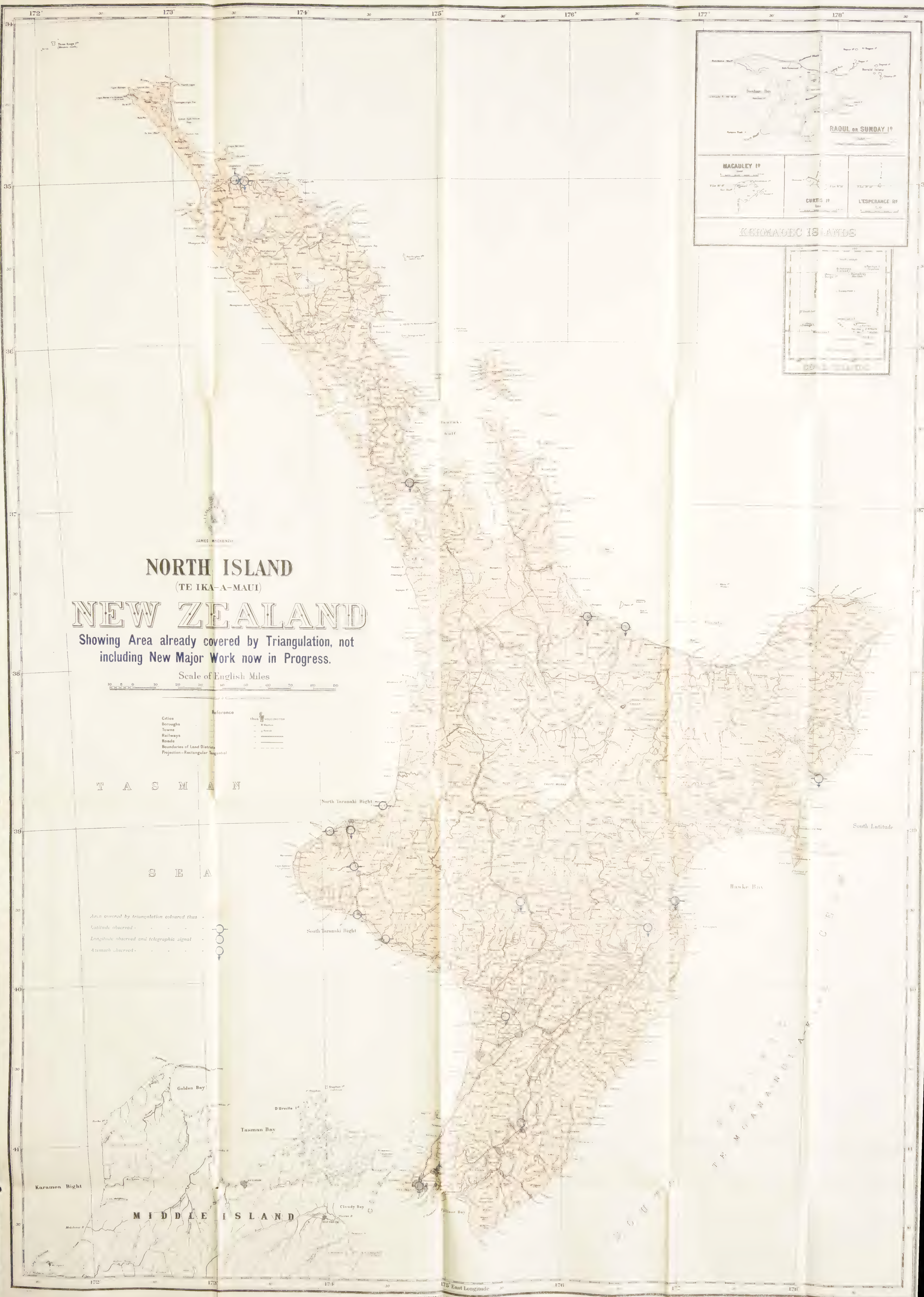
Each survey district was thus complete in itself, and either had its own base-line or extended the triangulation from an adjacent district. In this way very great flexibility was obtained, and no more triangulation need be carried out than that required for the settlement surveys in hand or anticipated. Triangulation with an accuracy in advance of the original Otago methods was carried out gradually throughout the Dominion after the abolition of the provinces in 1876, when Mr. Thomson took complete control as Surveyor-General of the Dominion, Mr. McKerrow being Assistant Surveyor-General. Long before this date, however, Captain T. Heale, Inspector of Native Surveys under the General Government, and Mr. H. Jackson, F.R.G.S., Chief Surveyor of the Wellington Province, had started in the Provinces of Auckland and Wellington a secondary system of triangulation, Captain Heale's work extending over a large area in the North Island, principally in connection with Native-lands surveys, whilst Mr. Thomas Humphries, Chief Surveyor of the Taranaki Province in the North Island, also made a beginning with a triangulation on sound lines, this triangulation governing his detail surveys. The main object of the triangulation has been practical utility rather than a strictly scientific work, and thus nearly every survey in Otago since 1856 may be said to be founded upon or connected with traingulation, and since 1876 the same statement applies to the whole Dominion.

The minor triangulation has always been the forerunner of settlement work, and has formed part and parcel of it, and has generally been accompanied by topography on a scale of 40 chains to 1 in.

These early trig. surveys met all settlement wants, and the topographical plans have given the fullest details regarding the character of the country, altitudes, soils, road routes, and all matters relating to the opening-up of land for settlement.

Since 1876 in many of the more settled districts the triangulation has been revised from time to time, and as the topography becomes better known it has been possible to increase the lengths of the sides of the triangles.


South Latitude
39°
30'
40°
O C E A N
P A C I F I C (partly shown: I W A)
Table Cape
Mahia Peninsula
Taumaraukura
Taumarunui
Rangiriri
Komokoriki
Maungaku
Pukeke
Kakari
Mokahiwi
Rushine
Te Porere
Tauraiwa
Ruakainga
Owairua
Tongariro
Ngauruhoe
Pukeonaki
Te Mata
Maungaroa
Te Waro
Hauhangatahi
Whirinaki
Te Ranga
Otautu
Mangaturuturu Str.
Ruapehu
Paratetaitonga
Ruapehu No. 2
Muruworu
Mangaiturua
Raetihi
Ohakune
Karioi
Waipuna
Tuhirangi
Teekaka
Tokopapa
Kirukahrama
Tapuae
Harawera
Korinth
Tauakira
Te Komai
Takihi
Ihupiri
Mangamahu
Hautawa
Ohingaiti
Mangaonoho
Makuhiri
Kowai
Okoia
Fordell
Aramoho
Ikitara
Hunterville
Ben Ledi
Leeds
Rata
Wangachu
Turakina
Glencairn
Waitapu
Marton
Greatford
Halcombe
Bulls
Mt Taylor
Mt Amon
Sanson
Mt Stewart
Awahuri
Bunnythorpe
Rongotea
Carnarvon
Colyton
Ashhurst
Wanganui R.
Wangaehu R.
Turakina R.
Rangitikei R.
Whangaehu R.
Moawhango R.



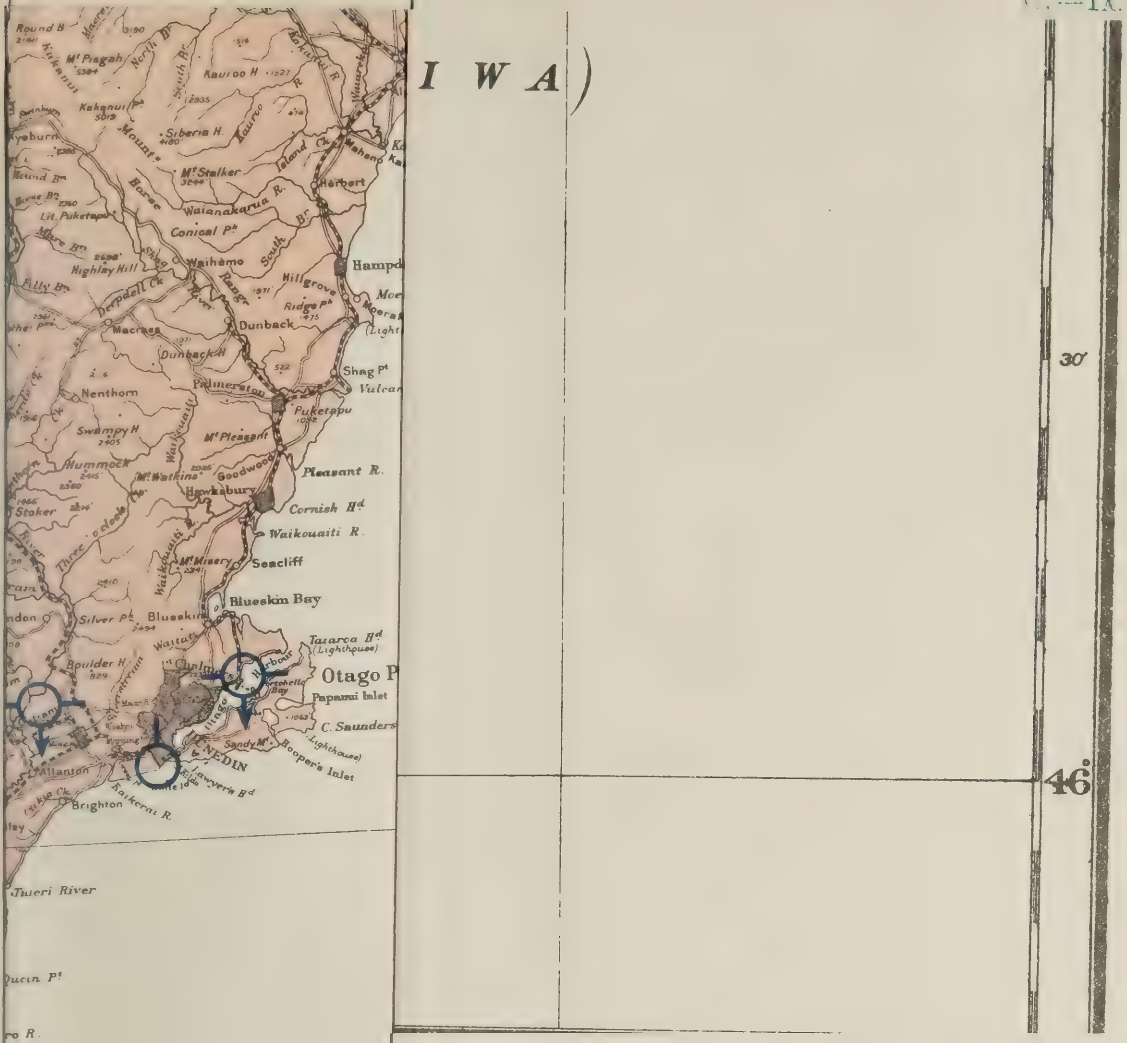
NORTH ISLAND

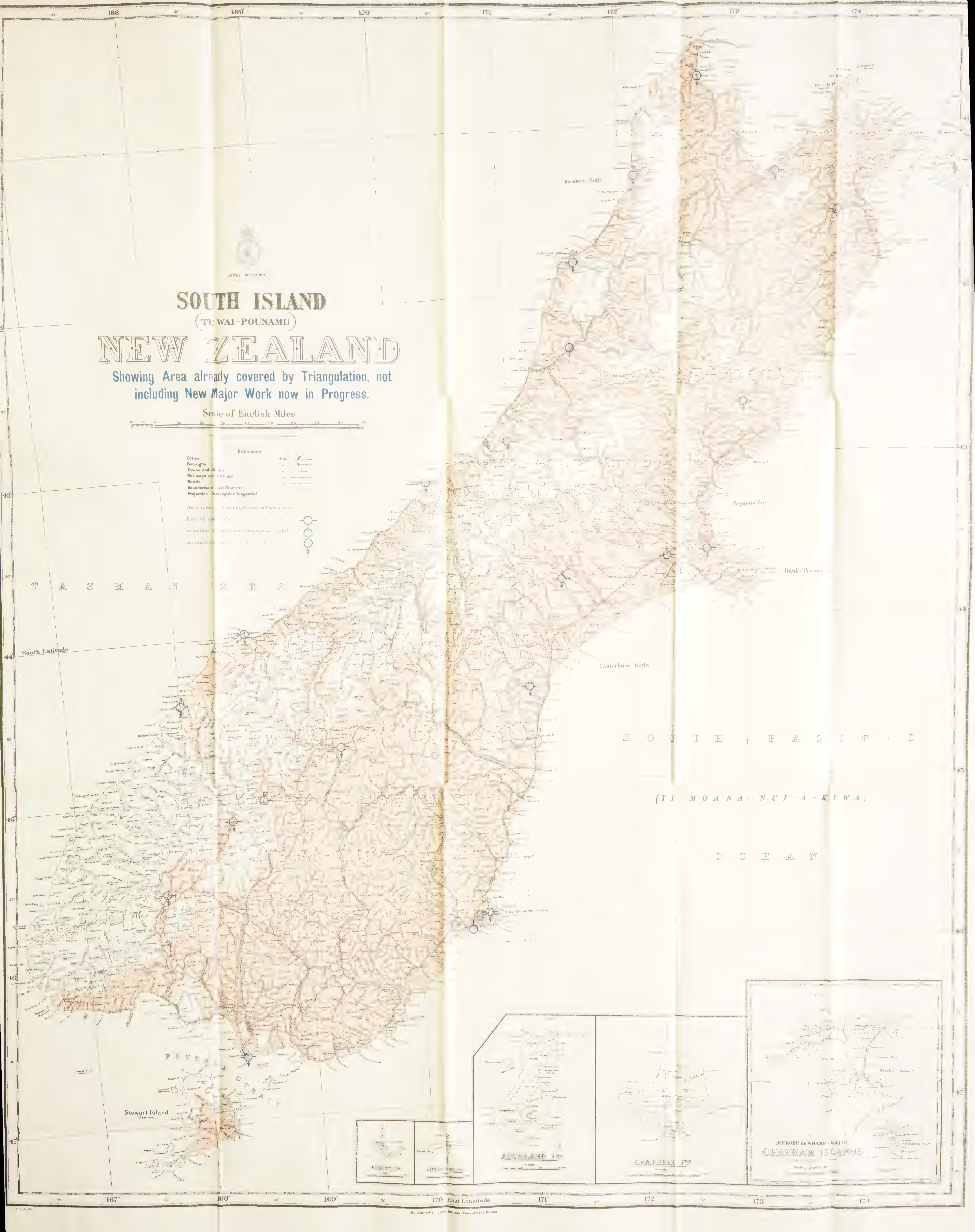
(TE IKA-A-MAUI)

NEW ZEALAND

Showing Area already covered by Triangulation, not including New Major Work now in Progress.

BY AUTHORITY: JOHN MACKAY, GOVERNMENT PRINTER


I W A)
Round B
Mt Pisgah
Kakanui
Kakanui Pk
Mount
North Br
South Br
Kauroo H
Kakanui R.
Kauroo R.
Waiareka
Siberia H.
Mt Stalker
Island Ck
Maheno
Herbert
Round Bn
Lit. Puketapu
Waianakarua R.
Conical Pk
Highlay Hill
Waihemo
Hampd
Moe
Moeraki
(Light
Horse
Range
Hillgrove
Ridge Pk
Dunback
Dunback H
Deepdell Ck
Macraes
Shag Pt
Vulcan
Palmerston
Puketapu
Nenthorn
Swampy H
Mt Pleasant
Waikouaiti
Hummock
Mt Watkins
Goodwood
Pleasant R.
Hawksbury
Cornish Hd
Waikouaiti R.
Stoker
Three o'clock
Mt Misery
Seacliff
Blueskin Bay
Silver Pk
Blueskin
Boulder H
Taiaroa Hd
(Lighthouse)
Otago P
Harbour
Papanui Inlet
C. Saunders
Sandy Mt
(Lighthouse)
Hooper's Inlet
DUNEDIN
Lawyer's Hd
Allanton
Brighton
Kaikorai R.
Taieri River
Queen Pt
ro R.
30'
46°



By Authority John Mackay, Government Printer

The Dominion may now be said to be entering upon a more scientific triangulation, and in the North Island four bases have been measured. In measuring the bases the greatest accuracy was aimed at, and they will be available for use when the time comes to run a series of primary triangles over the whole Dominion.

Up to the present four bases have been measured by Mr. John Langmuir, one of the senior Inspecting Surveyors. The standards of length used were the ten 1-chain steel bands certified to by the Standards Department, Board of Trade, London, in 1903. Invar bands in 5-chain lengths, supported at 50-link intervals, were used, and the details are fully given in the Survey Reports for 1909–10 and the following years.

The approximate lengths of the bases are as follows :—

"Wairarapa" base—length, 64776·6668 links.
Probable error ±0·0219, or 1 in 2,962,000; date measured, 25th March to 29th May, 1909 = 47 days = 5·2 days per mile.

"Eltham-Okaiawa" base—length, 79605·1228 links.
Probable error ± 0·0128, or 1 in 5,142,000; date measured, 5th April to 24th June, 1910 = 46 days = 4·6 days per mile.

"Waitemata" base—length, 41790·7756 links.
Probable error ± 0·0077, or 1 in 5,424,000; date measured, 27th June to 29th August, 1911 = 21 days = 4·0 days per mile.

"Matamata" base—length, 54799·7068 links.
Probable error ±0·01005, or 1 in 5,452,000; date measured, 2nd December, 1910, to 29th January, 1911 = 22 days = 3·2 days per mile.

In 1901 a secondary triangulation was commenced in the Wellington and Taranaki Districts, with a view of bringing into harmony all the different nets of minor triangles which had spread inland from the coastal chain from time to time in advance of the settlement work. A scheme of triangles with sides varying from 6 to 24 miles was drawn out to cover the whole of the minor work, using wherever possible the old minor trigs for the secondary points. The whole of the scheming-out of the triangles, erection of signals, and observation-work was done by one field party, which included the surveyor in charge and four men. The instrument used was a 10 in. Everest, graduated to 10 seconds and read by verniers, the best in the Department at that time.[*]

Owing to the urgency of settlement work in other parts, the revision of the triangulation was dropped in 1902, and not taken up again until 1909. The same instrument was again used, and the work proceeded at intervals during the next three years. The connection between the two bases is now almost complete.

The computations are being carried out by the Chief Computer, using the latest methods, and of the twenty-eight triangles calculated the value of "*m*"[†], using General Ferrero's formula, comes out at 1·55″; the average error per triangle is 2·25″; the area covered is 2,630 square miles, and there is, on the average, one trig. station in 119 square miles.

Considering the unsuitability of the New Zealand atmosphere for observation-work, and the class of instrument used, the results are considered satisfactory, and the work should fully serve the purpose intended.

The smoke, from bush-fires during the summer, and the haze caused by the sun on the moisture-laden country during the winter, prevented the signals showing out distinctly even on comparatively short lines. Numbers of trigs. were situated on the high backbone ranges, which were very rarely clear from mist. In many cases over a month elapsed before the observations at a station were completed.

When the primary work is undertaken, the observations will have to be taken at night in order to get over the vagaries of the atmosphere. Signals 25 miles distant can very rarely be seen during the day in New Zealand.

The maps accompanying this report show that practically the whole Dominion is covered by a minor triangulation, while the secondary triangulation in progress in the Wellington and Taranaki Districts is also shown.

I would like to point out that observations were made at a large number of stations for latitude and azimuth in 1883, 1884, 1885, by Mr. C. W. Adams, then Geodesical Surveyor, using a zenith telescope; also, prior to this, observations were made by Mr. J. W. A. Marchant. These stations, as well as a number of the others, where observations for latitude and azimuth were carried out in the earlier years by other officers of the Department, are shown on the map. Longitude has been determined on a number of occasions, at first by absolute methods or by the transportation of chronometers, later by telegraphic signals. The more recent determination for longitude by telegraphic signals are those between Wellington and Sydney, by Mr. C. W. Adams and the late Mr. H. C. Russell, Government Astronomer of New South Wales, in 1883; and between Wellington (*via* Doubtless Bay) and Norfolk Island, by Dr. O. Koltz, in 1903, thence from Norfolk Island to Australia and Canada by the Pacific cable.

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[*] New 8 in. micrometer transit theodolites have now been obtained for future triangulation.

[†] $m = \sqrt{\frac{\Sigma\Delta^2}{3N}}$ where Δ = error of triangle.
N = number of triangles.

In conclusion, I should like to place on record here, without making invidious distinctions, that the names in the past standing out prominently in connection with the advancement and control of the Dominion's geodesical minor triangulations, and accurate system of surveys generally, from their initiation up to the present day are—John Turnbull Thomson, F.R.G.S., Alexander Garvey, James McKerrow, F.R.A.S., Captain Theophilus Heale, Henry Jackson, F.R.G.S., Stephenson Percy Smith, F.R.G.S., John William Allman Marchant, Thomas Humphries, Charles William Adams, John Strauchon, Gerhard Mueller, John Holland Baker, John Samuel Browning, John Hay, Eric Charles Gold Smith, George John Roberts, William Arthur, and many others; whilst among the many who have been employed from first to last the following might be mentioned as probably the principal observers: Messrs. Alexander Dundas, James Mitchell, John Aitken Connell, Anthony Dixon Wilson, Henry James Lowe, Morgan Carkeek, John Annabell, James Arthur Thorpe, Thomas Noel Brodrick, Harry May Skeet, Llewellyn Smith, Horace Baker, Lawrence Cussen, John Langmuir, Thomas Maben, James Daniel Climie, James Baber, jun., Hubert Earle Girdlestone. Many of these are not now with us, and not a few have joined the "great majority," but it is only fitting that in the brief outline of New Zealand surveys the men who had so much to do with the building of the structure should not be forgotten.

Table 1.—SUMMARY OF FIELD-WORK EXECUTED BY THE STAFF AND CONTRACT SURVEYORS FROM 1ST APRIL, 1912, TO 31ST MARCH, 1913.

District.	Minor Triangulations.		Topographical Survey for Selection as "Unsurveyed Land."		Rural.		Village and Suburban.			Town Section Survey			Native-land Survey.			Gold-mining Survey.			Roads, Railways, and Water-races.		Other Work.	Total Cost of Surveyor and Party from 1st April, 1912, to 31st March, 1913.
	Acres.	Cost per Acre.	Acres.	Cost per Acre.	Acres.	Cost per Acre.	Acres.	No. of Sections.	Cost per Acre.	Acres.	No. of Sections.	Cost of Sections.	Acres.	No. of Secs. or Divs.	Cost per Acre.	Acres.	No. of Sections.	Cost per Acre.	Miles.	Cost per Mile.	Cost.	
		d.		d.		s.			s.			s.			d.			s.		£	£ s. d.	£ s. d.
Auckland ..	40,750	0·80	11,369	5·16	127,155·00	1·50	2,353·50	115	3·35	215·30	330	33·83	*436,884·00 †5,194·00	1703 15	16·99 34·58	..	..	..	108·52	21·33	2,602 0 6	52,813 11 1
Hawke's Bay	56,823	1·23	..	..	19,415·16	1·73	39·13	95	77·98	2·31	8	103·52	*31,260·56 †12,532·00	248 26	24·22 19·22	..	..	..	17·90	18 81	838 12 7	7,147 16 0
Taranaki ..	46,400	1·63	..	..	41,936·00	3·59	76·75	14	34·55	42·75	82	36·34	*51,311·00	96	15·05	..	..	..	8·68	39·42	143 9 0	9,464 17 1
Wellington	..	..	..	..	16,814·50	3·51	..	..	..	8·50	4	77·50	*122,038·00	555	16·72	..	..	..	5·50	38·45	1,121 15 6	15,072 13 9
Nelson ..	10,385	2·05	2,708	1·35	60,365·00	2·68	..	..	..	36·20	137	24·54	*7,578 00	18	19·51	..	..	..	28·15	18·35	903 6 4	14,508 17 1
Marlborough	..	..	..	..	8,825·00	2·21	33·00	2	10·30	1·00	3	63·00	*3,592·00	24	20·12	..	..	..	29·75	38·74	177 3 0	1,348 11 6
Westland ..	1,500	15·40	2,400	4·80	9,622·00	3·56	125·00	16	17·92	6·00	23	30·00	..	..	..	..	..	..	1·00	11·00	557 10 11	2,576 14 11
Canterbury	..	..	34,180	1·00	77,339 00	0·75	..	..	..	..	..	..	*14·50	3	206·90	..	..	..	5·75	20·65	400 5 6	3,593 15 2
Otago ..	..	..	..	..	11,948·00	1·92	..	..	..	..	..	..	..	..	..	206	4	4·04	0·62	54·16	231 1 2	3,022 3 5
Southland ..	..	..	..	..	28,197 00	3·49	51·29	28	32·67	19·34	52	27·18	*11·70	45	759·00	..	..	..	17·47	21·42	1,000 19 7	4,112 6 0
Means and totals	‡155,858	1·43	50,657	2·13	401,616·66	2·85	2,678·67	270	6 66	331·40	639	32·77	670,415·76	2733	17·37	206	4	4·04	223·34	24·23	7,976 4 1	113,661 6 0
Licensed surveyors (paid by applicants)					8,299·00	..	..	..	..	1·00	3	..	927·00	22	..	1,706	37	..	7·00	..	..	..
Totals					409,915·66	..	..	..	..	332·40	642	..	671,342·76	2755	..	1,912	41	..	230·34	..	..	..

Native Land Court † Maori Land Board. ‡ 6,223 acres of this is secondary triangulation.

Table 1a.—Return of Field-work executed by the Staff and Contract Surveyors from 1st April, 1912, to 31st March, 1913.

Auckland Land District.

Surveyor and District.	Minor Triangulations and Connecting Triangles.		Topographical Survey for Selection as Unsurveyed Land.		Rural.		Village and Suburban.			Town Section Survey.			Native Land Survey.			Gold-mining Survey.			Roads, Railways, and Water-races.		Other Work.	Total Cost of Surveyor and Party from 1st April, 1912, to 31st March, 1913.
	Acres.	Cost per Acre.	Acres.	Cost per Acre.	Acres.	Cost per Acre.	Acres.	No. of Sections.	Cost per Acre.	Acres.	No. of Sections.	Cost of Sections.	Acres.	No. of Sections or Divisions.	Cost per Acre.	Acres.	No. of Sections.	Cost per Acre.	Miles.	Cost per Mile.	Cost.	
Staff Surveyors.		d.		d.		s.			s.			s.			d.					£	£ s. d.	£ s. d.
W. J. Wheeler, Auckland(*a*)	..	..	..	..	..	..	..	..	..	120·00	101	39·38	..	..	..	..	..	..	..	..	685 7 5	972 14 0
H. F. Edgecumbe, Pakaumanu(*b*)	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	0·50	15·12	24 16 3	1,070 4 9
A. Wilson, Wharepapa, &c.(*c*)	..	..	..	..	24,987	1·32	..	..	..	..	..	..	*118	10	66·61	..	..	..	..	..	4 2 0	2,120 3 11
A. A. Seaton, Hokianga, &c.(*d*)	..	..	..	..	..	..	..	..	..	..	..	..	*266	2	40·80	..	..	..	1·25	42·82	229 0 11	1,099 16 7
V. I. Blake, Rotoma, &c.(*e*)	15,000	0·83	..	..	14,276	1·27	148·0	11	17·69	40·00	156	29·81	..	..	..	..	..	..	..	..	3 13 0	1,106 17 0
A. H. Vickerman, Waitemata, &c.(*f*)	20,000	0·34	..	..	3,485	1·39	2,108·0	82	2·13	..	..	..	*250	2	48·00	..	..	..	28·75	17·02	336 15 6	1,018 4 5
T. W. Hughes, Rotorua, &c.(*g*)	..	..	..	..	50	2·96	..	..	..	..	..	..	*17,212 †157	19 1	8·10 24·23		..	..	20·60	8·00	38 17 6	891 2 6
T. Carroll, Tuhua, &c.(*h*)	..	..	..	..	568	2·00	..	..	..	..	..	..	..	..	..	..	..	..	1·40	32·14	137 6 10	1,111 7 8
A. Hodgkinson, Tuhua, &c.(*i*)	..	..	..	..	..	..	..	..	..	..	..	..	†1,932	2	11·98	..	..	..	5·50	8·73	..	519 4 5
H. T. Mitchell, Rotorua, &c.(*j*)	..	..	..	..	..	..	86.0	5	2·56	..	..	..	*730 †59	70 1	75·75 65·13		..	..	9·00	28·66	251 6 8	1,086 17 4
D. I. Barron, Puhipuhi(*k*)	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	23 12 3
P. S. Sherratt, Kaihu, &c.(*l*)	..	..	..	..	7,119	4·33	..	..	..	..	..	..	..	..	..	..	..	..	4·75	21·97	64 14 2	641 3 6
H. R. Atkinson, Waoku, &c.(*m*)	..	..	11,369	5·16	..	..	..	..	..	..	..	..	†616	7	130·19	..	..	..	7·00	37·54	15 0 0	654 5 8
C. B. Turner, Kawakawa(*n*)	..	..	..	..	2,385	3·89	..	..	..	2·50	3	94·86	..	..	..	..	..	..	1·75	21·13	174 19 3	529 2 6
W. B. de L. Willis, Whangarei, &c.(*o*)	..	..	..	..	72	13·16	..	..	..	..	..	..	..	..	..	..	..	..	2·10	25·55	208 0 8	599 0 4
R. F. W. Mackenzie, Rotorua, &c.(*p*)	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	387 10 0
G. M. R. Jackson, Urutawa, &c.(*q*)	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	3·50	49·23	2 3 10	446 16 1
F. R. Burnley, Mangonui, &c.(*r*)	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	69 7 3
A. W. Craig, Rotoma, &c.(*s*)	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	384 11 0
P. W. G. Barlow, Waimana, &c.(*t*)	..	..	..	..	218	6·31	3·6	11	21·66	..	..	..	*1,700	48	35·54	..	..	..	1·50	18·72	15 10 10	1,084 10 7
A. D. Newton, Whareorino, &c.(*u*)	..	..	..	..	5,400	2·97	..	..	..	..	..	..	*5,522 †528	13 1	22·32 25·52		..	..	2·00	21·50	104 5 6	1,559 8 1
H. E. Walshe, Runanga, &c.(*v*)	..	..	..	..	50,683	0·56	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1,429 0 6
J. B. Thompson, Piako, &c.(*w*)	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	0·25	10·48	..	2 12 6
O. N. Campbell, Waimana, &c.(*x*)	..	..	..	..	110	3·82	..	..	..	..	..	..	..	..	..	..	..	..	3·12	25·54	..	100 13 6
R. G. MacMorran, Waihou, &c.(*y*)	..	..	..	..	126	3·61	..	..	..	..	..	..	*137	6	26·28	..	..	..	0·70	10.00	23 0 0	100 5 0
P. C. Gannaway, Thames(*z*)	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	342 11 0
Temporary Staff.																						
P. R. Wilkinson, Opotiki(*aa*)	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	484 2 0
W. M. Atkinson, Whangarei, &c.(*bb*)	..	..	..	..	1,599	2·88	6·6	2	48·18	32·30	35	18·51	*293	5	52·75	..	..	..	3·55	12·17	44 3 8	3 7 6
C. Kenny, Whakatane, &c.(*cc*)	..	..	..	..	..	..	..	..	..	..	..	..	*7.654	38	30·49	..	..	..	9·50	38·42	45 5 7	805 10 8
G. H. Purchas, Hapuakohe, &c.(*dd*)	..	..	..	..	234	5·59	..	..	..	15·00	27	38·46	..	..	..	..	..	..	..	..	82 5 11	854 2 5
J. H. Lindsay, Coromandel, &c.(*ee*)	..	..	..	..	4,130	4·01	..	..	..	..	..	..	*39	1	92·31	..	..	..	..	..	5 0 0	1,096 0 0
J. K. Ledger, Kawhia(*ff*)	5,750	2·32	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1·80	27·51	106 5 0	438 11 6
T. J. Mountain, Coromandel, &c (*gg*)	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	121 14 10
——, Tutamoe(*hh*)	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	90 11 3

Contract Surveyors.		d.		d.		s.			s.			s.			d.		.			£	£ s. d.	£ s. d.
E. F. Adams, Ohinemuri, &c.(*a*)	..	..	..	..	..	..	..	..	..	..	..	..	*688	29	75·20	..	..	..	..	..	..	215 11 8
E. W. Buckeridge, Kawhia(*b*)	..	..	..	..	..	..	..	..	..	..	..	..	*1,961	19	23·66	..	..	..	..	..	..	193 7 2
Y. Booker, Kawhia(*c*)	..	..	..	..	..	..	..	..	..	..	..	..	*14,120	69	22·88	..	..	..	..	..	..	1,346 3 9
J. B. Birkmyre, Whakatane, &c.(*d*)	..	..	..	..	..	..	..	..	..	..	..	..	*55	3	99·70	..	..	..	..	..	..	22 17 2
F. E. Byrne, Utakura(*e*)	..	..	..	..	..	..	..	..	..	..	..	..	*59	2	44·50	..	..	..	..	..	..	10 18 10
P. Chambers, Punakitere(*f*)	..	..	..	..	242	4·13	1·3	4	129·23	..	..	..	*20,063	38	10·77	..	..	..	..	..	..	958 17 11
A. W. Cheal, Punui, &c.(*g*)	..	..	..	..	..	..	..	..	..	..	..	..	*29,806	115	15·00	..	..	..	..	..	..	1,863 18 1
O. M. Creagh, Whangaparoa(*h*)	..	..	..	..	..	..	..	..	..	..	..	..	*33,041	13	6·51	..	..	..	..	..	..	896 18 3
J. Dawson, Maungakawa, &c.(*i*)	..	..	..	..	700	1·90	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	66 13 4
J. W. Davis, Tarawera, &c.(*j*)	..	..	..	..	..	..	..	..	..	..	..	..	*17,991	37	18·52	..	..	..	..	..	..	1,388 15 11
G. H. Davis, Mangaorongo, &c.(*k*)	..	..	..	..	..	..	..	..	..	..	..	..	*4,226	30	17·47	..	..	..	..	..	..	307 14 5
R. S. Finch, Russell, &c.(*l*)	..	..	..	..	..	..	..	..	..	..	..	..	*6,752 †1,902	25 3	24·26 28·97	..	..	..	..	..	..	912 2 7
P. C. Frasi, Otanake, &c.(*m*)	..	..	..	..	..	..	..	..	..	..	..	..	*5,122	48	35·24	..	..	..	..	..	..	752 1 7
R. E. Fry, Kaipara, &c.(*n*)	...	..	..	..	..	..	..	..	..	..	..	..	*2,938	5	17·32	..	..	..	..	..	..	211 19 10
Foster and Miller, Motatau, &c.(*o*)	..	..	..	..	..	..	..	..	..	..	..	..	*30,847	98	18·02	..	..	..	..	..	..	2,316 13 10
R. T. Goulding, Orahiri, &c.(*p*)	..	..	..	..	..	..	..	..	..	..	..	..	*2,150	9	13·05	..	..	..	..	..	..	116 17 0
D. W. Gillies, Orahiri, &c.(*q*)	..	..	..	..	..	..	..	..	..	..	..	..	*2,851	10	10·44	..	..	..	..	..	..	124 0 10
E. H. Hardy, Otanake(*r*)	..	..	..	..	..	..	..	..	..	..	..	..	*426	14	12·66	..	..	..	..	..	..	22 9 5
M. F. Haszard, Hapuakohe(*s*)	..	..	..	..	5,318	2·06	..	..	..	..	..	..	*14,341	29	9·75	..	..	..	..	..	..	1,131 13 4
F. J. Hosking, Kaihu, &c.(*t*)	..	..	..	..	..	..	..	..	..	..	..	..	*3,482	11	24·10	..	..	..	..	..	..	349 13 4
H. K. Hovell, Whangaparaoa(*u*)	..	..	..	..	..	..	..	..	..	..	..	..	*8,757	3	6·84	..	..	..	..	..	..	249 11 9
H. P. Hanify, Rotorua(*v*)	..	..	..	..	..	..	..	..	..	..	..	..	*1,058	10	47·64	..	..	..	..	..	..	210 0 0
Hunt and Sandford, Punakitere(*w*)	..	..	..	..	35	5·00	..	..	..	..	..	..	*6,705	95	36·28	..	..	..	..	..	..	1,022 7 10
H. Hammond, Mangamuka, &c.(*x*)	..	..	..	..	482	3·02	..	..	..	..	..	..	*10,249	18	14·65	..	..	..	..	..	..	698 3 3
G. A. Jackson, Otamatea(*y*)	..	..	..	..	..	..	..	..	..	..	..	..	*3,620	24	16·70	..	..	..	..	..	..	251 17 9
R. C. Jordan, Pakaumanu(*z*)	..	..	..	..	..	..	..	..	..	..	..	..	*5,361	21	19·31	..	..	..	..	..	..	431 7 7
J. A. Johnston, Tuhua, &c.(*aa*)	..	..	..	..	..	..	..	..	..	..	..	..	*4,859	19	15·16	..	..	..	..	..	..	307 1 0
T. W. Kenny, Waihou, &c.(*bb*)	..	..	..	..	..	..	..	..	..	..	..	..	*4,095	26	24·06	..	..	..	..	..	..	410 9 2
A. F. Matthews, Tokatoka(*cc*)	..	..	..	..	..	..	..	..	..	..	..	..	*2,353	3	34·36	..	..	..	..	..	..	336 18 6
T. J. Mountain, Orere(*dd*)	..	..	..	..	..	..	..	..	..	..	..	..	*15,699	24	16·53	..	..	..	..	..	..	1,081 8 7
G. A. Martin, Russell(*ee*)	..	..	..	..	120	4·67	..	..	..	..	..	..	*10,758	10	11·22	..	..	..	..	..	..	530 19 0
R. M. McIver, Pirongia(*ff*)	..	..	..	..	..	..	..	..	..	..	..	..	*5,527	37	17·26	..	..	..	..	..	..	397 10 2
C. C. Otway, Whangaroa, &c.(*gg*)	..	..	..	..	4,023	1·45	..	..	..	..	..	..	*9,915	44	18·02	..	..	..	..	..	..	1,036 8 11
S. Orbell, Wharepapa(*hh*)	..	..	..	..	..	..	..	..	..	..	..	..	*3,064	17	16·89	..	..	..	..	..	..	215 13 9
J. A. Parry, Mangaorongo	..	..	..	..	..	..	..	..	..	..	..	..	*95	1	30·52	..	..	..	..	..	..	12 1 7
C. W. Reardon, Maketu, &c.(*ii*)	..	..	..	..	..	..	..	..	..	..	..	..	*8,622	48	18·04	..	..	..	..	..	..	648 0 0
J. Reilly, Harataunga(*jj*)	..	..	..	..	..	..	..	..	..	..	..	..	*260	2	46·75	..	..	..	..	..	..	50 13 0
F. A. Stevens, Maketu(*kk*)	..	..	..	..	..	..	..	..	..	..	..	..	*220	14	84·49	..	..	..	..	..	..	77 9 1
S. B. Sims, Tapapa(*ll*)	..	..	..	..	..	..	..	..	..	5·50	8	70·87	*10,727	57	21·54	..	..	..	..	..	..	991 4 5
W. C. Spencer, Piako, &c.(*mm*)	..	..	..	..	105	2·86	..	..	..	..	..	..	*867	5	28·70	..	..	..	..	..	..	118 13 5
D. Stubbing, Cambridge(*nn*)	..	..	..	..	..	..	..	..	..	..	..	..	*6,749	37	23·56	..	..	..	..	..	..	662 8 7
A. B. Stubbing, Maketu(*oo*)	..	..	..	..	..	..	..	..	..	..	..	..	*928	2	27·82	..	..	..	..	..	..	107 12 0
Sladden and Palmer, Awakino(*pp*)	..	..	..	..	..	..	..	..	..	..	..	..	*88	7	84·90	..	..	..	..	..	..	31 2 8
Thomson and Farrer, Cambridge(*qq*)	..	..	..	..	..	..	..	..	..	..	..	..	*32,698	84	13·70	..	..	..	..	..	..	1,866 16 5
P. Ward, Maungataniwha, &c.(*rr*)	..	..	..	..	..	..	..	..	..	..	..	..	*28,276	205	23·82	..	..	..	..	..	..	2,805 16 3
H. M. Wilson, Hukatere, &c.(*ss*)	..	..	..	..	688	1·78	..	..	..	..	..	..	*30,494	72	13·74	..	..	..	..	..	..	1,807 5 8
Means and totals	40,750	0·80	11,369	5·16	127,155	1·50	2,353·5	115	3·35	215·30	330	33·83	442,078	1,718	17·20	..	..	..	108·52	21·33	2,602 0 6	52,813 11 1
Licensed surveyors (paid for by applicants)	..	..	..	..	6,094	..	..	..	..	..	..	..	*870	14	..	46	2	..	..	..	..	..
Totals	..	..	..	..	133,249	..	..	..	..	..	..	..	442,948	1,732	..	46	2	..	..	..	..	..

Note.—For references see next page.

* Native Land Court.

† Maori Land Board.

Table 1a.—RETURN OF FIELD-WORK EXECUTED BY THE STAFF AND CONTRACT SURVEYORS FROM 1ST APRIL, 1912, TO 31ST MARCH, 1913—*continued.*

Auckland Land District—continued.

REFERENCES TO PAGE 64.

(*a*) "Other work" is chiefly inspections. £105 1s. 3d. carried forward.
(*b*) "Other work" is inspection. 11,000 acres Crown land in hand. £1,155 10s. 8d. carried forward. Scheme plan, 11,000 acres forwarded; cost carried forward.
(*c*) Rough bush land; 24,800 acres almost complete. £2,614 17s. 11d. carried forward. Includes two parties.
(*d*) "Other work" is principally resurveys. £1,631 13s. 6d. carried forward.
(*e*) Moturiki Town and Suburbs and bush land. £714 15s. carried forward.
(*f*) Broken to undulating scrub and bush. Road survey includes 13 miles engineering. "Other work" is inspections, redefining boundaries, &c. £196 7s. 7d. carried forward
(*g*) Open bush land. £624 13s. 5d. carried forward.
(*h*) Rough bush country. "Other work" is reports, &c. £1,796 15s. 11d. carried forward. Scheme plan 4,500 acres Crown land forwarded; cost carried forward.
(*i*) Easy open country. Joined Auckland Staff, September. £374 14s. 5d. carried forward.
(*j*) "Other work" is principally Maori Land Board work, reports, &c. £1,428 11s. 4d. carried forward.
(*k*) Just commenced on Crown land at Puhipuhi. £23 12s. 3d. carried forward.
(*l*) Bush land. "Other work" is scattered surveys of creamery-sites, &c. £300 19s. carried forward. 5,000 acres in hand.
(*m*) Rough bush; topographical survey for Native Land Court. Maori Land Board surveys include reports, road-grading, &c. £202 2s. 6d. carried forward.
(*n*) "Other work" is mostly office-work, &c. £59 18s. 11d. carried forward.
(*o*) "Other work" is small scattered surveys. £289 18s. 11d. carried forward.
(*p*) About 5,000 acres on hand. Joined Staff, October. £387 10s. carried forward. Scheme plan 2,355 acres forwarded, Crown land; cost carried forward.
(*q*) Joined field staff, October. £140 7s. carried forward.
(*r*) Joined field staff, March. £69 7s. 3d. carried forward.
(*s*) Joined field staff, November. £384 11s. carried forward.
(*t*) Rough country. 20,000 acres Crown land on hand. £1,676 15s. 11d. carried forward.
(*u*) Rough bush land; two parties. "Other work" is survey scenic reserve, &c. £981 8s. 7d. carried forward. 12,000 acres in hand.
(*v*) This work was carried out by one of the Hawke's Bay staff because it was more easily worked from that district.
(*w*) Balance of cost of party as Drainage Engineer. £68 2s. carried forward.
(*x*) Balance of expenditure charged against Rangitaiki Drainage.
(*y*) Balance of expenditure charged against Hauraki Plains and engineering works. £32 10s. carried forward.
(*z*) Attached to Drainage Engineer. £342 11s. carried forward.
(*aa*) 5,900 acres on hand. Joined staff, October. £484 2s. carried forward. Scheme plan 5,900 acres Crown land forwarded; cost carried forward.
(*bb*) Transferred to Napier (assistant completed plans). "Other work" is resurveying.
(*cc*) Open country. £264 14s. carried forward.
(*dd*) Level and undulating. £854 2s. 5d. carried forward. Hauraki pastoral-lease surveys and roads in hand.
(*ee*) Rough bush land. £797 6s. carried forward. Hauraki pastoral-lease surveys and roads in hand.
(*ff*) "Other work" is exploring, grading, &c. Joined field staff September. £227 6s. carried forward. In hand, 5,000 acres.
(*gg*) 2,365 acres Hauraki pastoral leases on hand. Joined staff February. £121 14s. 10d. carried forward.
(*hh*) Work by J. C. Olsen, unlicensed surveyor's assistant. Commenced March.

REFERENCES TO PAGE 65.

(*a*) Mostly swamp.
(*b*) Rough bush.
(*c*) Mostly undulating bush and scrub.
(*d*) Open.
(*e*) Bush.
(*f*) Rough bush.
(*g*) Surveys comprise all classes of country.
(*h*) Very rough bush.
(*i*) Open and scrub.
(*j*) Mostly open and scrub.
(*k*) All classes of country.
(*l*) Mostly rough bush.
(*m*) Undulating bush and scrub.
(*n*) Mostly scrub.
(*o*) Surveys comprise all classes of country.
(*p*) Mostly bush.
(*q*) Mostly scrub.
(*r*) Open.
(*s*) Mostly open and swamp.
(*t*) Mostly bush.
(*u*) Rough bush.
(*v*) Rough bush.
(*w*) All classes of country.
(*x*) All classes of country.
(*y*) Mostly undulating scrub land.
(*z*) Mostly rough bush.
(*aa*) Bush and open.
(*bb*) Mostly swamp and open.
(*cc*) Rough bush.
(*dd*) Very rough bush. Work performed prior to his joining the staff in February.
(*ee*) Mostly rough bush.
(*ff*) All classes of country.
(*gg*) Undulating bush and open.
(*hh*) Bush and open.
(*ii*) Bush and swamp.
(*jj*) Bush.
(*kk*) Open and scrub.
(*ll*) Mostly bush.
(*mm*) Rough bush.
(*nn*) Mostly open, undulating and level.
(*oo*) Mostly open.
(*pp*) Bush.
(*qq*) Surveys comprise all classes of country.
(*rr*) Surveys comprise all classes of country.
(*ss*) Surveys comprise all classes of country.

Table 1a.—Return of Field-work executed by the Staff and Contract Surveyors from 1st April, 1912, to 31st March, 1913—*continued*.

Hawke's Bay Land District.

Surveyor and District.	Minor Triangulations.		Rural.		Village and Suburban.			Town Section Survey.			Native Land Survey.			Roads, Railways, and Water-races.		Other Work.	Total Cost of Surveyor and Party from 1st April, 1912, to 31st March, 1913.	Remarks.
	Acres.	Cost per Acre.	Acres.	Cost per Acre.	Acres.	No. of Sections.	Cost per Acre.	Acres.	No. of Sections.	Cost of Sections.	Acres.	No. of Sections or Divisions.	Cost per Acre.	Miles.	Cost per Mile.	Cost.		
Staff Surveyors.		d.		s.			s.			s.			d.		£	£ s. d.	£ s. d.	
T. Brook, Takapau	..	..	1,390·00	3·25	..	..	..	..	..	..	..	..	..	7.00	11·71	475 8 10	783 12 2	£308 3s. 4d. was brought forward from last year.
R. P. Greville, Porangahau, &c. ..	13,100	0·75	..	..	..	..	..	..	..	..	..	..	..	..	..	42 0 0	42 0 0	Manawaangiangi Block.
J. Roddick, Tutamoe, &c. ..	..	..	4,900·00	2·58	6·73 14·01	14 56	103·47 64·28	..	..	..	*4·10 *35·64 *53·25 *42·38 *11·42 *21·21 *20·56	2 2 2 3 2 3 3	307·31 78·78 54·67 113·26 246·93 153·51 124·55	4·00	36·18	..	792 13 3	£135 7s. 2d. carried forward to 7¼ miles of road.
E. H. Farnie, Matakaoa, &c. ..	37,500	1·37	..	..	..	..	..	..	..	..	*95·00 *184·00	2 6	56·26 48·00	6·25	13·76	2 0 0	890 10 0	£1,425 5s. 6d. is carried forward for execution of plans, Native Land Court surveys, and Kaiwaka Block, which are incomplete.
T. Cagney, Turanganui, &c. ..	..	..	..	..	5·00	21	106·28	..	..	..	*1,598·00 *79·00 *246·00 *23·00 ‡12,500·00	2 2 2 2 25	10·06 71·39 32·73 †233·00 18·91	..	..	27 3 4	284 16 6	£633 5s. 1d. brought forward against Omahu No. 2 Block, Waihau Settlement, plans incomplete.
H. E. Walshe, Ruataniwha, &c. ..	..	..	15·93	19·25	..	..	..	..	..	..	..	..	..	0·15	64·20	..	253 10 7	Mr. Walshe also surveyed the Pohokura Block of 50,683 acres in the Auckland Land District, at a cost of £1,429 0s. 6d. (See table for that district.) £951 2s. 2d. is carried forward against various works awaiting completion of field-work and plans.
W. M. Gray, Waiau	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	17 4 3	17 4 3	"Other work" comprises compass traverse and erecting tripods. £421 13s. 3d. to be carried forward to next year. Waihau Settlement and Waiau Block, of which plan and field-work Waiau incomplete.
F. R. Burnley, Patoka	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	Completed 9,265 acres Waihau Settlement at a cost of £314 5s. 6d., but this has been carried forward to Mr. T. Cagney for completion of plans. Mr. Burnley was transferred to Auckland in February.
Temporary Staff.																		
W. M. Atkinson, Porangahau, &c.	§6,223	1·37	45·73	22·67	3·24 10·15	2 2	108·02 56·51	1·10 1·21	2 6	212·20 67·30	..	..	..	0·50	29·00	274 16 2	445 1 10	Triangulation is set down as secondary. £209 16s. 10d. to be carried forward to next year
Contract Surveyors.																		
Kennedy Bros., Woodville ..	..	..	993·50	2·04	..	..	..	..	..	..	..	..	..	..	..	..	101 15 0	Ahuatauranga, Block VIII, Woodville Survey District.
H. Baker, Porangahau, &c. ..	..	..	12,070·00	1·08	..	..	..	..	..	..	..	..	..	..	..	..	654 6 2	Manawaangiangi Block.
Licensed Surveyors	..	..	..	..	..	..	..	..	..	..	*28,847·00 ‡32·00	215 1	24·00 24·00	.. ..	.. ..	..	2,863 18 9 18 7 0	
Means and totals ..	56,823	1·23	19·415·16	1·73	39·13	95	77·98	2·31	8	103·52	43,792·56	274	22·78	17·90	18·81	838 12 7	7,147 16 0	

* Native Land Court. † A charge of £11 3s. 4½d. per subdivision was made in this case. ‡ Maori Land Board. § Secondary triangulation.

Table 1a.—Return of Field-work executed by the Staff and Contract Surveyors from 1st April, 1912, to 31st March, 1913—*continued.*

Taranaki Land District.

Surveyor and District.	Minor Triangulations.		Rural.		Village and Suburban.			Town Section Survey.			Native Land Survey.			Roads, Railways, and Water-races.		Other Work.	Total Cost of Surveyor and Party from 1st April, 1912, to 31st March, 1913.	Remarks.
	Acres.	Cost per Acre.	Acres.	Cost per Acre.	Acres.	No. of Sections.	Cost per Acre.	Acres.	No of Sections.	Cost of Sections.	Acres.	No. of Sections or Divisions.	Cost per Acre.	Miles.	Cost per Mile.	Cost.		
Staff Surveyors.		d.		s			s.			s.			d.		£	£ s. d.	£ s. d.	
W. Laing, Omara, Kapara, &c. ..	..	..	19,114	2·36	..	..	..	..	..	..	..	..	..	..	..	..	818 17 5	Rough and broken bush country, difficult of access. £650 14s. 8d. to be carried forward against incompleted sectional surveys in the Mokau-Mohakatino Block, and £30 against minor trig. work, all in the Mimi and Waro Survey Districts.
D. M. Wilson, Pouatu, Mahoe, &c.	..	..	..	..	35·25	9	55·66	36·75	60	40·00	..	..	..	8·25	39·93	..	973 9 7	£3,826 5s. 4d. carried forward against Tariki Estate, Whakaihuwaka North, and Taumatamahoe Blocks of 21,000 acres, of which 17,500 acres is completed in the field and plans well in hand. This large amount includes £2,869 19s. 4d. for surveys executed in previous years. The roads were located in very rough precipitous country, and done in the middle of winter, to provide the required access from the railway at Whangamomona, &c., to Crown lands about to be opened for selection.
N. C. Kensington, Ohura, Rangi, &c.	30,000	1·38	12,163	3·44	..	..	..	..	..	..	*46	1	46·95	0·13	30·77	89 13 4	971 9 1	"Other work" consists of preliminary-survey scheme and supervision of the Wanganui River Trust contract (5,649 acres), and inspection of Native surveys for purposes of progress payments, also ordinary field inspections. Rough bush country. £726 13s. 2d. carried forward against unfinished surveys in Whatitokarua, Tapuiwahine, and miscellaneous sectional surveys.
T. G. Sole, Mahoe, Paritutu, &c. ..	..	..	..	..	41·50	5	16·76	6·00	22	26·36	..	..	..	..	..	45 11 8	109 7 4	The town and suburban sections were situated in bush country. "Other work" consists of pegging out sections in New Plymouth for lease, &c.; access to Education Reserve No. 16, of XII, Hawera Survey District; replacing standards; cemetery-site, Pukearuhe; survey of island in Waitara River; and extensions of standard work in New Plymouth.
A. F. Waters, Mapara	12,200	1·95	..	..	..	..	..	..	..	..	..	..	..	..	..	..	846 7 4	£1,313 8s. 8d. to be carried forward against surveys of Mapara-Haupehi Block, minor trig., and road through Native blocks. £25 18s. of this sum will be charged to Crown land in the Pahi Survey District, about to be let by contract.

		d.		s.			s.			s.			d.		£	£ s. d.	£ s. d.	
Temporary Staff.																		
R. R. Richmond, Heao ..	..	..	333	17·18	..	..	..	..	..	..	*3,700	1	24·74	0·30	29·00	..	386 17 1	£44 15s. 4d. carried forward against scenic reserves on right bank of Wanganui River, Maraekowhai and Whitianga Blocks. Mr. Richmond reported Native opposition during survey of Maraekowhai A Block. Mr. Richmond was transferred to Canterbury at end of October.
J. P. Larkin, Mokau, Tainui, &c. ..	4,200	2·47	1,612	16·45	..	..	..	..	..	..	..	..	..	..	..	8 4 0	973 0 0	"Other work" consists of two small miscellaneous surveys. The 1,612 acres comprise scenic reserves on the right bank of the Mokau River involving 56 miles of traverse on rough and precipitous bush country. £730 2s. 11d. carried forward against surveys in Blocks VI and X, Aria Survey District, Waro Block, and other miscellaneous surveys. The Waro Block has been explored, roads located, and scheme of subdivision made.
Contract Surveyors.																		
Sladden and Palmer, Mokau, Tainui, &c.	..	..	1,773	2·74	..	..	..	..	..	..	..	..	..	..	..	..	242 17 3	Scenery reserves in Mokau-Mohakatino Block. Rough and precipitous bush country.
W. C. Wall, Ohura, Heao, &c. ..	..	..	4,600	3·70	..	..	..	..	..	..	*2,007	5	10·48	..	..	..	938 6 8	Scenery reserves on right bank of Wanganui River, also River Trust survey. Rough bush country.
S. Orbell, Ngatimaru, Upper Waitara, &c.	..	..	2,341	3·96	..	..	..	..	..	..	..	..	..	..	..	..	463 0 0	This survey was done for the purpose of providing holdings for the landless Natives at Purangi. The sections, considering the nature of the country, which is rough bush, were small, but the scheme had to conform to the Act.
C. F. Dowsett, Paritutu, Waitara ..	..	..	..	..	..	..	..	..	..	..	*60	5	108·00	..	..	..	26 19 5	Open country.
J. A. Johnston, Aria, Totoro ..	..	..	..	..	..	..	..	..	..	..	*6,835	13	18·39	..	..	..	523 18 1	Rough bush country.
E. W. H. Thompson, Aria, Ohura ..	..	..	..	..	..	..	..	..	..	..	*2,689	9	15·70	..	..	..	176 0 5	Hilly, open, and bush country.
Muir and Bogle, Totoro, Mapara, &c.	..	..	..	..	..	..	..	..	..	..	*10,964	12	14·72	..	..	..	672 15 7	Rough bush country.
E. W. M. Lysons, Tangitu, Mapara, &c.	..	..	..	..	..	..	..	..	..	..	*18,254	29	13·03	..	..	..	991 5 8	Rough bush country.
A. W. Cheal, Aria, Totoro, &c. ..	..	..	..	..	..	..	..	..	..	..	*6,147	16	10·85	..	..	..	277 18 6	Rough bush country.
R. C. Jordan, Piopiotea West ..	..	..	..	..	..	..	..	..	..	..	*389	3	25·40	..	..	..	41 3 9	Open country.
E. H. Hardy, Mapara	..	..	..	..	..	..	..	..	..	..	*220	2	34·03	..	..	..	31 3 11	Open country.
Means and totals ..	46,400	1·63	41,936	3·59	76·75	14	34·55	42·75	82	36·34	*51,311	96	15·05	8·68	39·42	143 9 0	9,464 17 1	

* Native Land Court.

Table 1a.—Return of Field-work executed by the Staff and Contract Surveyors from 1st April, 1912, to 31st March, 1913—*continued.*

Wellington Land District.

Surveyor and District.	Secondary Triangulation.		Topographical Survey for Selection as Unsurveyed Land.		Rural.		Town Section Survey.			Native Land Survey.			Roads, Railways, and Water-races.		Other Work.	Total Cost of Surveyor and Party from 1st April, 1912, to 31st March, 1913.	Remarks.
	Acres.	Cost per Acre.	Acres.	Cost per Acre.	Acres.	Cost per Acre.	Acres.	No. of Sections.	Cost of Sections.	Acres.	No. of Sections or Divisions.	Cost per Acre.	Miles.	Cost per Mile.	Cost.		
Staff Surveyors.						s.			s.			d.		£	£ s. d.	£ s. d.	
R. P. Greville, Wellington ..	..	..	..	..	549·0	2·35	8·50	4	77·50	..	..	..	0·50	23·00	412 16 6	545 7 6	Inspecting surveyor.
J. R. Strachan, Puketoi, Mangahao ..	..	..	..	..	4,811·5	2·71	..	..	..	..	..	..	..	..	119 8 3	808 14 2	£325 8s. 4d. carried forward on behalf of settlement bush lands; 4,450 acres in hand.
J. Stevenson, Rarete, Makotuku ..	..	..	..	..	107·0	1·83	..	..	..	*4,087	20	42·00	5·00	40·00	51 10 0	1,006 12 0	Has 14,850 acres Native survey in hand. £1,134 9s. 9d. carried forward. Cadet assisting.
A. M. Roberts, Whirinaki	..	..	..	..	993·0	2·27	..	..	..	*406	61	†133·00	..	..	144 11 10	1,319 6 0	Has part of 40,000 acres bush settlement in hand, and 600 acres Native finished. £2,201 15s. 5d. carried forward.
H. E. Girdlestone, Haurangi and general	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	965 4 5	Has 2,500,000 acres of secondary triangulation in hand, on which £2,030 4s. 7d. is carried forward. Has also 10,000 acres of settlement survey in hand, of which 6,246 acres, with 5½ miles of road, are completed in the field, and on which £453 13s. is carried forward.
W. Stewart, Whirinaki	..	..	..	..	5,475·0	‡5·46	..	..	..	..	..	..	..	..	156 3 10	1,499 16 0	Bush surveys. Has 5,000 acres in hand. Carries forward £1,282 7s. 9d.
W. M. Gray, Ngamatea, &c. ..	..	..	..	..	4,292·0	2·60	..	..	..	..	..	..	..	..	119 17 6	291 6 11	Transferred to Hawke's Bay District in October.
H. L. P. Dyett, Whirinaki ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	21 7 5	336 3 9	Retired from Department, 21st September.
V. Blake, Whirinaki	..	..	..	..	..	..	..	..	..	..	..	..	..	..	96 0 2	674 5 9	Has 7,000 acres bush-settlement land in hand. £859 12s. 3d. carried forward.
Contract Surveyors.																	
J. Annabell, Ikitara, &c.	..	..	..	..	..	..	..	..	..	*3,837	19	16·72	..	..	..	267 8 0	These surveys are nearly all in rough forest country, and in almost all cases are subdivisional surveys where a large proportion of the boundaries consists of earlier surveys adopted without resurvey. The cost of each block, therefore, as given is practically only for the completion of the survey, and owing to the varying proportion of adopted work in each survey no comparative cost per acre can be correctly obtained. In most cases the totals are made up of a number of different blocks for each surveyor.
W. O. Beere, Ohinewairua ..	..	..	..	..	..	..	..	..	..	*72	4	126·00	..	..	..	37 16 0	
M. Carkeek, Waitohu	..	..	..	..	..	..	..	..	..	*362	24	92·37	..	..	..	139 6 10	
J. W. Davis, Mount Robinson, &c. ..	..	..	..	..	..	..	..	..	..	*10,187	30	14·64	..	..	..	621 8 6	
Davis and Porteous, Waitohu, &c. ..	..	..	..	..	..	..	..	..	..	*31,208	97	14·79	..	..	..	1,922 16 6	
Dix and Marchant, Maungakaretu, &c.	..	..	..	..	..	..	..	..	..	*24,026	62	12·70	..	..	..	1,271 19 1	
P. R. Earle, Ohinewairua	..	..	..	..	..	..	..	..	..	*1,103	5	15·58	..	..	..	71 12 7	
H. P. Hanify, Kaitieke	..	..	..	..	..	..	..	..	..	*380	11	69·16	..	..	..	109 10 8	
G. A. M. Luff, Mikimiki, &c. ..	..	..	..	..	..	..	..	..	..	*563	2	12·28	..	..	..	28 17 0	
Muir and Bogle, Ohinewairua, Wangaehu, &c.	..	..	..	..	..	..	..	..	..	*4,043	29	22·49	..	..	..	378 17 7	
Middleton and Smith, Pencarrow, &c.	..	..	..	..	..	..	..	..	..	*9,040	63	25·50	..	..	..	960 11 8	
L. H. Reynolds, Wainuioru ..	..	..	..	..	..	..	..	..	..	*348	20	69·93	..	..	..	101 8 0	
C. W. Reardon, Nukumaru ..	..	..	..	..	..	..	..	..	..	*500	6	21·77	..	..	..	45 7 0	
J. A. Syverston, Waipawa, &c. ..	..	..	..	..	..	..	..	..	..	*2,154	22	23·44	..	..	..	210 7 8	
Seaton, Sladden, and Pavitt, Kaiwaka, &c.	..	..	..	..	587·0	2·10	..	..	..	*22,148	42	10·91	..	..	..	1,068 5 3	
W. C. Wall, Owatua, Hunua, &c. ..	..	..	..	..	..	..	..	..	..	*6,101	9	7·81	..	..	..	198 13 7	
T. Ward, Mount Robinson, &c. ..	..	..	..	..	..	..	..	..	..	*1,473	29	31·21	..	..	..	191 11 4	
Means and totals	..	..	..	..	16,814·5	3·51	8·50	4	77·50	*122,038	555	16·72	5·50	38·45	1,121 15 6	15,072 13 9	

Native Land Court. † See general report, cadastral revision survey. ‡ Cost includes other work which is inseparable, chiefly preliminary explorations and reconnaissance survey of the Waimarino Block.

Table 1a.—Return of Field-work executed by the Staff and Contract Surveyors from 1st April, 1912, to 31st March, 1913—*continued*.

Surveyor and District.	Minor Triangulations.		Topographical Survey for Selection as Unsurveyed Land.		Rural.		Village and Suburban.			Town Section Survey.			Native Land Survey.			Roads, Railways, and Water-races.		Other Work.	Total Cost of Surveyor and Party from 1st April, 1912, to 31st March, 1913.	Remarks.
	Acres.	Cost per Acre.	Acres.	Cost per Acre.	Acres.	Cost per Acre.	Acres.	No. of Sections.	Cost per Acre.	Acres.	No. of Sections.	Cost of Sections.	Acres.	No. of Sections or Divisions.	Cost per Acre.	Miles.	Cost per Mile.	Cost.		
Marlborough Land District.																				
Staff Surveyors.						s.			s.			s.			d.		£	£ s. d.	£ s. d.	
A. Hodgkinson, Pine Valley, Heringa, &c.	..	..	..	..	1,351	1·78	..	..	..	0·5	1	63·0	..	..	..	27·75	40·19	136 1 0	542 12 1	Rural surveys in rough forest-clad country. "Roads and Railways" include survey of 18 miles of Picton–Blenheim Railway. This survey being in a very old-settled district with comparatively few recent surveys, and, the original surveys being magnetic only, the cost was much higher than originally anticipated. "Other work" includes revision of old magnetic surveys in the Waitohi Valley.
Office staff (various districts)	..	..	..	..	112	1·43	..	..	..	0·5	2	63·0	..	..	..	0·50	26·00	25 0 0	52 6 0	"Other work" comprised inspection surveys.
Temporary Staff.																				
L. Hunt, Heringa, Wakamarina	..	..	..	..	7,362	2·31	3	1	17·47	..	..	..	..	..	..	..	..	16 2 0	413 14 0	Rural surveys in heavy bush and rough country. "Other work" was measurement of timber in the Ronga Valley.
Contract Surveyors.																				
F. Stephenson Smith (various districts) A. P. Seymour (various districts Middleton and Smith (various districts)	..	..	..	..	..	..	30	1	9·61	..	..	..	*3,592	24	20·12	1·50	16·25	..	339 19 5	Surveys at schedule rates.
Means and totals	..	..	..	..	8,825	2·21	33	2	10·30	1·0	3	63·0	*3,592	24	20·12	29·75	38·74	177 3 0	1,348 11 6	
Licensed surveyors (paid by applicants)	..	..	..	..	..	..	..	..	..	1·0	3	..	*57	8	..	7·00	..	..	..	
Totals	..	..	..	..	..	..	..	..	..	2·0	6	..	3,649	32	..	36·75	..	..	..	

* Native Land Court.

Surveyor and District.	Minor Triangulations.		Topographical Survey for Selection as Unsurveyed Land.		Rural.		Village and Suburban.			Town Section Survey.			Native Land Survey.			Roads, Railways, and Water-races.		Other Work.	Total Cost of Surveyor and Party from 1st April, 1912, to 31st March, 1913.	Remarks.
	Acres.	Cost per Acre.	Acres.	Cost per Acre.	Acres.	Cost per Acre.	Acres.	No. of Sections.	Cost per Acre.	Acres.	No. of Sections.	Cost of Sections.	Acres.	No. of Sections or Divisions.	Cost per Acre.	Miles.	Cost per Mile.	Cost.		
Westland Land District.																				
Staff Surveyors.		d.		d.		s.			s.			s.					£	£ s. d.	£ s. d.	
W. Wilson, Punakaiki, &c.	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	269 12 9	269 12 9	Finished work. Includes £196 17s. 6d., salary, &c., extended leave. £145 9s. 10d. carried forward.
C. H. Morison, Toaroha, Kopara, Haupiri, &c.	..	..	1,800	4·0	3,912	3·15	13	7	49·23	..	..	..	..	..	..	1	11·0	29 3 6	718 3 4	Nine months' work (absent in Canterbury three months).
A. N. Harrop, Mahinapua, Kanieri, &c.	1,500	15·4	..	..	3,230	3·80	..	..	..	6	23	30·0	..	..	..	..	..	228 14 8	973 13 4	Nine months' work (absent in Canterbury three months). Balance from last year, £529 5s. 3d. Carried forward to next year, £300 18s. 7d.
J. Cunningham, Poerua, Mount Bonar, Hohonu, &c.	..	..	600	7·2	2,480	3·93	112	9	14·28	..	..	..	..	..	..	..	..	30 0 0	615 5 6	Carried forward, £286 4s. 4d.
Means and totals	1,500	15·4	2,400	4·8	9,622	3·56	125	16	17·92	6	23	30·0	..	..	..	1	11·0	557 10 11	2,576 14 11	

Table 1a.—RETURN OF FIELD-WORK EXECUTED BY THE STAFF AND CONTRACT SURVEYORS FROM 1ST APRIL, 1912, TO 31ST MARCH, 1913—*continued.*

Nelson Land District.

Surveyor and District.	Minor Triangulations.		Topographical Survey for Selection as Unsurveyed Land.		Rural.		Town Section Survey.			Native Land Survey.			Roads, Railways, and Water-races.		Other Work.	Total Cost of Surveyor and Party from 1st April, 1912, to 31st March, 1913.	Remarks.
	Acres.	Cost per Acre.	Acres.	Cost per Acre.	Acres.	Cost per Acre.	Acres.	No. of Sections.	Cost of Sections.	Acres.	No. of Sections or Divisions.	Cost per Acre.	Miles.	Cost per Mile.	Cost.		
Staff Surveyors.		d.		d.		s.			s.			d.		£	£ s. d.	£ s. d.	
J. D. Thomson, Hope, Gordon, &c.	..	..	..	..	9,161	2·22	..	..	..	..	..	..	1·00	22·00	49 18 2	1,337 0 7	"Rural" is applications and Crown land. Rough broken country in heavy bush. "Other work" is inspections, &c. £248 5s. carried forward to next year. Cadet assisting with second party.
H. Maitland, Aorere, Rotoroa, &c.	..	..	..	..	2,100	6·00	..	..	..	..	..	..	4·50	26·97	..	937 4 8	Isolated applications and roads in rough broken country in heavy bush. £589 8s. 8d. carried forward to next year against the Gowan Block of 10,000 acres; nearly half completed in the field.
J. L. D'Arcy Irvine, Waimea, &c.	..	..	..	..	..	..	3·5	28	34·57	..	..	..	..	..	585 12 2	865 12 10	"Town survey" is workers' homes, City of Nelson. "Other work" is inspection surveys, £430 1s. 2d.; office work, £64; absent owing to serious accident, £79 11s., &c. £231 12s. 8d. carried forward to next year.
S. L. Fairhall, Howard, Tutaki, &c.	..	..	..	..	..	..	..	..	..	..	..	..	12·30	5·50	71 7 8	1,588 4 6	Road surveys consist mostly of repegging; no plans required. "Other work" is standard survey of Murchison, 4½ miles. £2,220 7s. 5d. carried forward to next year, representing some 24,000 acres practically complete in the field, &c. A second party assisting under an unlicensed assistant.
D. Nelson, Waitakere, Aorere, &c.	2,400	4·50	..	..	2,577	2·90	..	..	..	..	..	..	1·40	19·25	7 16 6	854 12 0	Rough broken country in heavy bush. £554 12s. 2d. carried forward to next year, representing rural surveys in Waitakere, Lewis, and Matiri Survey Districts, &c.
W. D. Armit, Totaranui	..	..	..	..	..	..	..	..	..	..	..	..	6·20	27·00	35 10 0	760 9 0	Tortuous road surveys in heavy bush intersecting small sections. "Other work" is prospecting for roads, repairing trig. stations, &c. £557 11s. carried forward to next year, representing 20 miles of road survey, &c.
——, Motueka, Mount Arthur, &c.	7,985	1·32	2,708	1·35	3,388	2·60	..	..	..	..	..	..	1·75	31·14	15 2 8	695 11 0	Applications, &c., in high broken country in heavy bush. £1,428 15s. carried forward to next year, representing some 10,000 acres, complete in the field. This work carried out by Mr. J. H. Buttress, authorized assistant.
—— Totaranui, Oparara	..	..	..	..	1,159	3·57	..	..	..	..	..	..	..	..	9 5 6	642 5 3	Rough broken country in heavy bush. £426 2s. 1d. carried forward to next year, representing 1,553 acres of rural land and 40,000 acres of triangulation nearly complete in field. This work carried out by Mr. F. H. Waters, authorized assistant.
Temporary Staff.																	
S. S. Springall, Otumahana, Waitakere	..	..	..	..	4,791	3·60	1·2	5	50·00	..	..	..	1·00	57·00	73 13 8	830 18 4	Applications, &c., in rough broken country in heavy bush, on west coast. "Other work" consists of remeasuring the Karamea base and some alignment surveys in Westport. £320 4s. 9d. carried forward to next year.

		d.		d.		s.			s.			d.		£	£	s.	d.	£	s.	d.	
J. Stevenson, Burnett, Matakitaki, &c.	..	..	..	..	8,330	1·85	..	..	..	..	..	..	..	..	55	0	0	1,590	4	5	The Warwick Block broken country in heavy bush. £1,623 6s. 11d. carried forward to next year, representing part of the Brighton Block and triangulation on west coast, 150,000 acres of which is completed in the field. A second party assisting under an authorized assistant.
P. R. Wilkinson, Matakitaki ..	..	..	..	..	2,120	1·71	..	..	..	..	..	..	..	..	..			25	2	2	Part of Rappahannock Block; broken country, heavy bush. Left the field in April. Subsequently transferred to Auckland.
S. Parkinson, Rotoroa	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..			48	5	1	Took the field in the middle of March. Assisting Mr. Maitland on the Gowan Block.
Contract Surveyors.																					
T. Learmont, Reefton, Maimai, &c. ..	..	..	..	..	3,791	3·00	31·5	104	20·60	..	..	..	..	..	..			676	5	6	Applications, &c., in Inangahua County; very steep and broken country in heavy bush on west coast. "Town survey" is mining township of Hukawai.
J. Snodgrass, Steeples, Ngakawau, &c.	..	..	..	..	1,847	2·95	..	..	..	..	..	..	..	..	..			272	11	0	Applications in the Buller County. Very steep and broken country in heavy bush on the west coast.
J. Cumine, Burnett	..	..	..	..	1,701	2·75	..	..	.	..	..	..	.	..				646	7	9	Maruia South Block. Crown land in Maruia Valley. Very steep country in heavy bush on the west coast.
Davis and Porteous, Otumahana, Kongahu	..	..	..	..	9,951	2·66	..	..	..	..	..	..	..	.				1,326	16	0	Kongahu Block. Rough broken country in heavy bush on the west coast.
Middleton and Smith, Otumahana ..	..	..	..	..	5,392	2·50	..	..	..	*5,864	9	13·03	.	.				992	8	9	Rural is Blue Duck Block, which is rough broken country on the west coast. Native is part of D'Urville Island (subdivision only).
C. M. Hoult, Kaiteriteri	..	..	..	..	1,057	2·25	..	..	..	..	..	..	..	..	..			118	18	3	Applications in heavy bush on the Takaka Hills.
Ledger and Hoult, Wangamoa ..	.	..	..	..	..	..	..	..	..	*1,714	9	42·00	..	..	..			300	0	0	Wangarae Native Reserve. Very high broken country in heavy bush.
Means and totals	10,385	2·05	2,708	1·35	60,365	2·68	36·2	137	24·54	*7,578	18	19·58	28·15	18·35	903	6	4	14,508	17	1	

* Native Land Court.

Table 1a.—Return of Field-work executed by the Staff and Contract Surveyors from 1st April, 1912, to 31st March, 1913—*continued*.

Canterbury Land District.

District.	Minor Triangulations.		Typographical Survey for Selection as "Unsurveyed Land."		Rural.		Village and Suburban.			Town Section Survey.			Native-land Survey.			Roads, Railways, and Water-races.		Other Work.	Total Cost of Surveyor and Party from 1st April, 1912, to 31st March, 1913.	Remarks
	Acres.	Cost per Acre.	Acres.	Cost per Acre.	Acres.	Cost per Acre.	Acres.	No. of Sections.	Cost per Acre.	Acres.	No. of Sections.	Cost of Sections.	Acres.	No. of Secs. or Divs.	Cost per Acre.	Miles.	Cost per Mile.	Cost.		
Staff Surveyors.				d.		s.									d.		£	£ s. d.	£ s. d.	
A. G. Allom, Waimate	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	100 6 0	100 6 0	£16 7s. 4d. was carried forward from last year against Waimate Settlement survey. This survey was commenced by Mr. Allom, and on his being granted extended leave was finished by Mr. Drury, and an amount of £63 1s. 2d. (including the £16 17s. 4d.) is included in Mr. Drury's total cost of rural surveys, as it was found impossible to allocate the area done by Mr. Allom.
A. J. Mountfort, Opuha, Waimate, Corwar (and assistant)	..	..	34,180	1·0	38,673	0·46	..	..	..	..	..	..	..	..	..	..	..	10 0 0	966 16 3	£727 19s. 11d. was carried forward from last year, and is included in the total cost of topographical and rural surveys. £606 10s. 11d. is carried forward against work in hand, and includes cost of Mr. Hathaway and party, £169 13s., Greta Peaks runs survey.
E. de C. Drury, Waimate, Mount Peel, Nimrod (and assistant)	..	..	..	..	7,403	1·47	..	..	..	..	..	..	*14·5	3	206·9	..	..	30 15 5	1,228 0 6	£63 1s. 2d., expenses incurred by Mr. Allom on Waimate Settlement survey is included in the cost of rural surveys, as the work was taken over and completed by Mr. Drury. £653 13s. 8d. is carried forward against work in hand, and includes cost of Mr. Hathaway and party (£206 14s. 3d.) on survey of Mount Nessing Settlement.
A. N. Harrop, Four Peaks, Pareora	..	..	..	..	17,695	0·64	..	..	..	..	..	..	..	..	..	..	..	23 10 0	263 15 8	£327 12s. 8d. was carried forward from last year, and is included in the total cost of rural surveys. Mr. Harrop returned to Westland in June.
C. H. Morison, Rolleston, Oxford ..	..	..	..	..	1,008	1·66	..	..	..	..	..	..	..	..	..	4·0	21·42	77 16 4	247 9 2	Mr. Morison returned to Westland in June.
Temporary Staff.																				
L. Hunt, Opuha, Oxford ..	..	..	..	..	11,160	0·36	..	..	..	..	..	..	..	..	..	1·75	18·89	..	192 7 5	£256 12s. 10d. carried forward against work in hand. Temporarily transferred from Marlborough District.
R. R. Richmond, Hinds, Ashley, Oxford, &c.	..	..	..	..	1,400	0·86	..	..	..	..	..	..	..	..	..	..	..	157 17 9	295 0 2	£76 15s. 3d. carried forward against work in hand.
Means and totals ..	..	..	34,180	1·0	77,339	0·75	..	..	..	..	..	..	*14·5	3	206·9	5·75	20·65	400 5 6	3,593 15 2	

* Native Land Court.

Table 1a.—Return of Field-work executed by the Staff and Contract Surveyors from 1st April, 1913, to 31st March, 1913—*continued.*

Surveyor and District.	Rural.		Village and Suburban.			Town Section Survey.			Native Land Survey.			Gold-mining Survey.			Roads, Railways, and Water-races.		Other Work.	Total Cost of Surveyor and Party from 1st April, 1912, to 31st March, 1913	Remarks.
	Acres.	Cost per Acre.	Acres.	No. of Sections.	Cost per Acre.	Acres.	No. of Sections.	Cost per Acre.	Acres.	No. of Sections or Divisions.	Cost per Acre.	Acres.	No. of Sections.	Cost per Acre.	Miles.	Cost per Mile.	Cost.		
Otago Land District.																			
Staff Surveyors.		s.												s.		£	£ s. d.	£ s. d.	
W. T. Neill, City of Dunedin	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1,358 7 6	Standard survey, City of Dunedin. Total cost to 31st March, 1913, £3,078 9s. 4d.
D. I. Barron, Leaning Rock, Teviot, &c.	8,646	1·64	..	..	..	..	..	..	..	..	..	..	..	..	..	..	79 0 9	791 1 9	About 8,350 acres consisted of open country cut into four small grazing-runs. The balance of 296 acres represents scattered application surveys in the Clutha Valley. Mr. Barron was transferred to Auckland in November.
S. T. Burton, Woodland, Rimu, &c.	1,484	4·70	..	..	..	..	..	..	..	..	..	206	4	4·04	0·62	54·16	152 0 5	785 10 2	£208 17s. 3d. is carried forward to next year. This work was partly heavy bush scenic reserves in Southern Otago and partly application and settlement surveys very scattered in the Otago Central District.
Contract Surveyor.																			
N. Paterson, Clutha	1,818	0·95	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	87 4 0	Otanomomo Settlement. All level open land, 5 miles from Balclutha.
Means and totals	11,948	1·92	..	..	..	..	..	..	..	..	..	206	4	4·04	0·62	54·16	231 1 2	3,022 3 5	
Licensed surveyors (paid for by applicants)	..	..	..	..	..	..	..	..	..	..	..	1,592	34	..	..	..	..	..	
Totals	..	..	..	..	..	..	..	..	..	..	..	1,798	38	..	..	..	..	..	
Southland Land District.																			
Staff Surveyors.		s.			s.			s.			d.					£	£ s. d.	£ s. d.	
C. Otway, Longwood, Jacob River, Oteramika, &c.	5,162	4·30	..	..	..	..	..	..	..	..	..	..	..	..	1·75	12·40	381 14 8	827 6 0	£685 8s. 7d. brought forward from last year. Mostly rough bush country. Cadet assisting from 1st January.
D. Macpherson, Aparima, Waiau	10,120	3·85	..	..	..	..	..	..	..	..	..	..	..	..	2·30	16·13	50 10 11	1,011 12 5	£1,041 18s. brought forward from last year. £16 18s. carried forward to next year. Bush and hilly open country. Cadet assisting up to 12th January.
N. L. Falkiner, Campbelltown, Invercargill, &c.	8,575	2·09	3·72	9	61·88	19·34	52	27·18	..	..	..	..	..	..	7·82	32·00	469 9 6	1,207 19 10	£494 13s. 5d. brought forward from last year. £5 carried forward to next year. Bush country—open, hilly, and swampy.
H. M. Thompson, Longwood and Alton	2,879	6·12	47·57	19	30·38	..	..	..	..	..	..	..	..	..	5·60	11·60	82 14 6	919 3 9	£338 8s. 10d. brought forward from last year. £155 16s. 8d. carried forward to next year. Chiefly heavy rough bush country.
Contract Surveyors.																			
H. R. Dundas, Jacob River and Aparima	46	6·39	..	..	..	..	..	..	*11·7	45	759·0	..	..	..	..	..	..	51 14 0	Contracts.
Blaikie and Wilson, Hokonui	1,415	1·10	..	..	..	..	..	..	..	..	..	..	..	..	..	..	8 2 0	86 2 0	Contracts.
L. Webb, Invercargill	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	8 8 0	8 8 0	Alignment survey, part Georgetown, Borough of Invercargill.
Means and totals	28,197	3·49	51·29	28	32·67	19·34	52	27·18	*11·7	45	759·0	..	..	..	17·47	21·42	1,000 19 7	4,112 6 0	
Licensed surveyors (paid for by applicants)	2,205	..	..	..	..	..	..	..	..	..	..	68	1	..	..	..	..	..	
Totals	30,402	..	..	..	..	..	..	..	..	..	..	68	1	..	..	..	..	..	

* Native Land Court.

Table 2.—RETURN SHOWING SURVEYORS EMPLOYED AND THE WORK ON HAND ON 1ST APRIL, 1913.

Chief Surveyors.	Surveyors employed.			Work on Hand.					
	Staff.	Temporary.	Contract.	Land District.	Trig.	Settlement.	Town.	Native Land Survey.	Roads.
					Sq. Mls.	Acres.	Acres.	Acres.	Miles.
Head Office	4	..	..	Engaged on standard land drainage and inspection surveys and other works.					
〃	4	..	..	〃					
H. M. Skeet	21	6	..	Auckland	10·60	212,595	..	100,187	157·25
R. T. Sadd	5	1	..	Hawke's Bay	312·93	*122,274	..	72,186	44·75
G. H. Bullard	4	1	..	Taranaki	48·00	76,619	10	..	21·00
T. N. Brodrick	6	1	..	Wellington	3,919·37	54,450	..	14,850	30·00
F. A. Thompson	7	3	..	Nelson	277·00	96,024	..	..	39·00
W. H. Skinner	1	1	..	Marlborough	..	6,533	2	..	4·00
H. D. M. Haszard	4	..	..	Westland	9·50	14,774	..	..	9·00
C. R. Pollen	3	1	..	Canterbury	..	105,440	..	..	3·00
E. H. Wilmot	2	..	..	Otago	..	289	..	..	..
G. H. M. McClure	4	..	..	Southland	..	7,499	..	..	0·50
Total staff surveyors	65	14	..	..	4,577·40	696,497	12	187,223	308·50
Contract surveyors	..	..	53	Auckland	..	7,809	..	300,010	26·25
	..	..	10	Hawke's Bay	..	..	..	32,865	..
	..	..	11	Taranaki	..	10,224	..	32,356	6·00
	..	..	13	Wellington	..	1,829	..	62,520	..
	..	..	3	Nelson	..	6,650	..	..	..
	..	..	1	Marlborough	..	612	2	..	..
	..	..	1	Southland	..	..	..	23	..
Total contract surveyors	..	..	92	..	..	27,124	2	427,774	32·25
Total staff and contract surveyors	65	14	92	..	4,577·40	723,621	14	614,997	340·75

* 49,000 acres of this will be a preliminary survey.

Table 3.—PLANS PLACED ON CROWN GRANTS AND OTHER INSTRUMENTS OF TITLE FROM THE CROWN FROM 1ST APRIL, 1912, TO 31ST MARCH, 1913.

Land District.	Number.					Cost.		
	Singly.	In Duplicate.	In Triplicate.	In Quadruplicate.	Total Copies.	£	s.	d.
Auckland	..	23	1,319	18	4,075	270	0	0
Hawke's Bay	..	314	117	6	1,003	62	13	9
Taranaki	10	96	220	10	902	81	5	5
Wellington	12	24	525	..	1,635	81	15	0
Nelson	..	..	41	..	123	20	6	8
Marlborough	7	18	32	..	139	11	8	6
Westland	..	152	68	..	508	63	10	0
Canterbury	29	..	..	..	29	2	3	6
Otago	..	112	152	..	680	95	0	0
Southland	32	44	292	..	996	53	16	4
Totals	90	783	2,766	34	10,090	741	19	2

Table 4.—WORK DONE UNDER THE LAND TRANSFER ACT, ETC., FROM 1ST APRIL, 1912, TO 31ST MARCH, 1913.

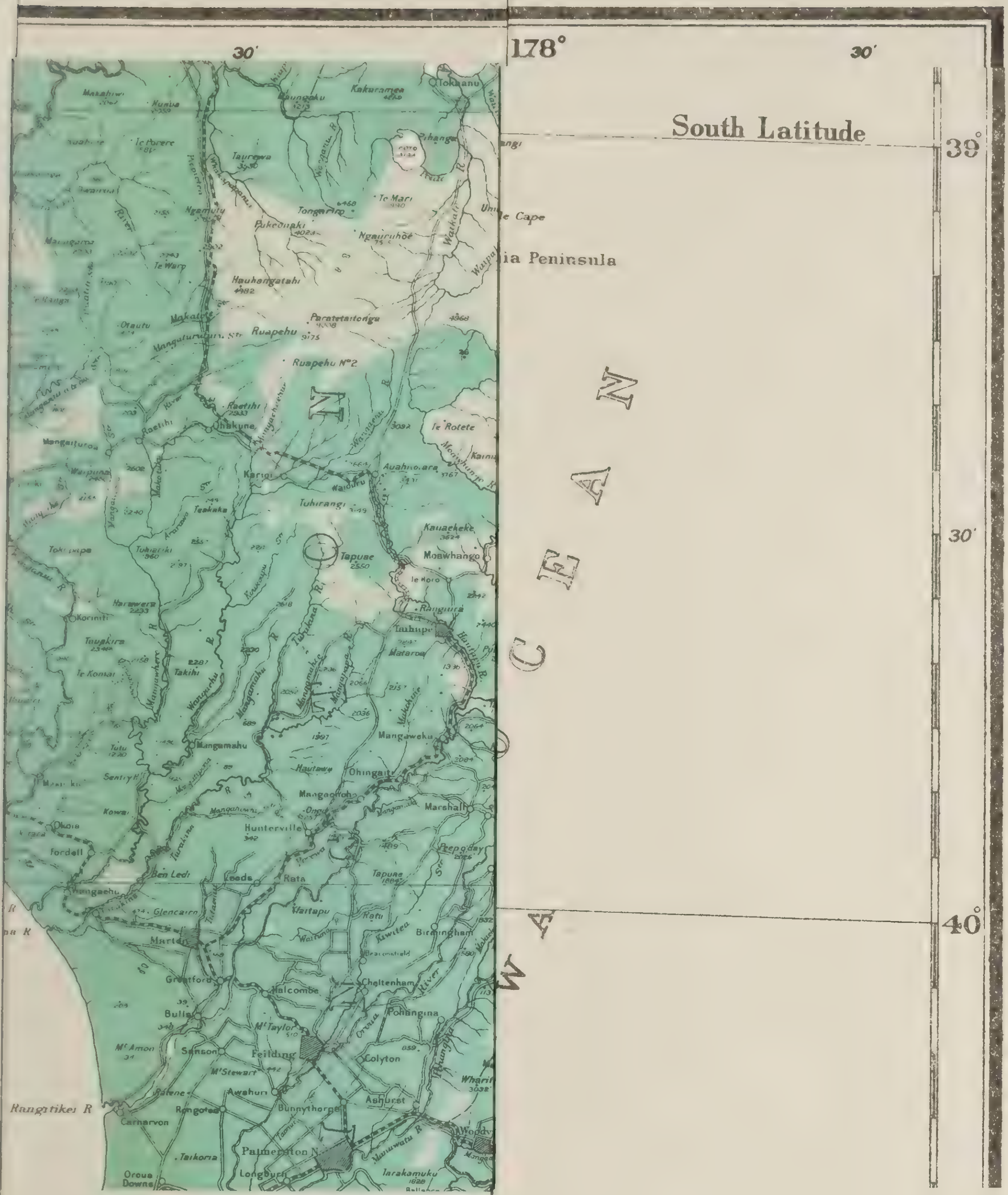
Land District.	Number of Plans passed.	Deeds and other Instruments passed.	Number of Plans placed on Certificates of Title.					Miscellaneous Plans, &c.	Cost.		
			Singly.	In Duplicate.	In Triplicate.	In Quadruplicate.	Total Copies.		£	s.	d.
Auckland	781	3,649	39	3,394	..	..	6,827	50	593	17	0
Hawke's Bay	141	714	1	639	..	..	1,279	..	283	8	1
Taranaki	132	1,020	10	502	2	..	1,020	..	183	9	4
Wellington	222	2,931	4,505	..	..	..	4,505	..	1,650	4	0
Nelson	75	176	..	221	..	..	442	..	155	15	5
Marlborough	32	..	5	154	43	..	442	..	82	10	9
Westland	26	..	..	49	42	..	224	..	71	7	8
Canterbury	396	2,720	22	2,184	35	..	4,495	45	1,673	16	2
Otago	106	1,150	..	898	..	..	1,796	..	389	6	4
Southland	141	950	16	664	2	..	1,350	..	388	6	6
Totals	2,052	13,310	4,598	8,705	124	..	22,380	95	5,472	1	3

Table 5.—Lithographs and Photographs printed and sold, from 1st April, 1912, to 31st March, 1913.

Land District.	Number of Lithographs printed.	Number of Photographs printed.	Amount of Fees received from Sale of Maps, Lithographs, &c.		
			£	s.	d.
Auckland	2,000	..	339	19	3
Hawke's Bay	..	..	..		
Taranaki	..	..	68	11	8
Wellington	..	..	24	3	0
Nelson	..	..	15	0	0
Marlborough	..	..	34	15	4
Westland	..	..	16	16	0
Canterbury	..	..	62	18	6
Otago	2,236	..	93	18	6
Southland	..	..	61	2	4
Totals	4,236	..	717	4	7

Approximate Cost of Paper.—Preparation, not given; printing (1,500 copies, including maps, plans, and illustrations), £170.

By Authority: John Mackay, Government Printer, Wellington.—1913.
Price 2s. 9d.]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178°
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South Latitude
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40°
O C E A N
Tokaanu
Kakuramea
Taurewa
Tongariro
Te Mari
Ngauruhoe
Pukeonaki
Hauhangatahi
Paretetaitonga
Ruapehu
Ruapehu No. 2
Raetihi
Ohakune
Karioi
Tuhirangi
Tapune
Moawhango
Kauaeheke
Te Rotete
Auahitotara
Taihape
Mataroa
Rangiura
Hautapu
Mangaweka
Ohingaiti
Mangaonoho
Ongo
Marshall
Hunterville
Rata
Leeds
Ben Ledi
Vinegar Hill
Waitapu
Rata
Kiwitea
Birmingham
Marton
Greatford
Halcombe
Cheltenham
Pohangina
Bulls
Sanson
Feilding
Colyton
Ashurst
Awahuri
Bunnythorpe
Rangiotu
Carnarvon
Palmerston N.
Longburn
Taikorea
Oroua Downs
Rangitikei R.
Mangaweka
Wanganui
Fordell
Kauangaroa
Turakina
Koriniti
Te Komai
Tutu
Sentry Hill
Kauaeheke
Tarakamuku
Woodville
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Ngamatea
Whare
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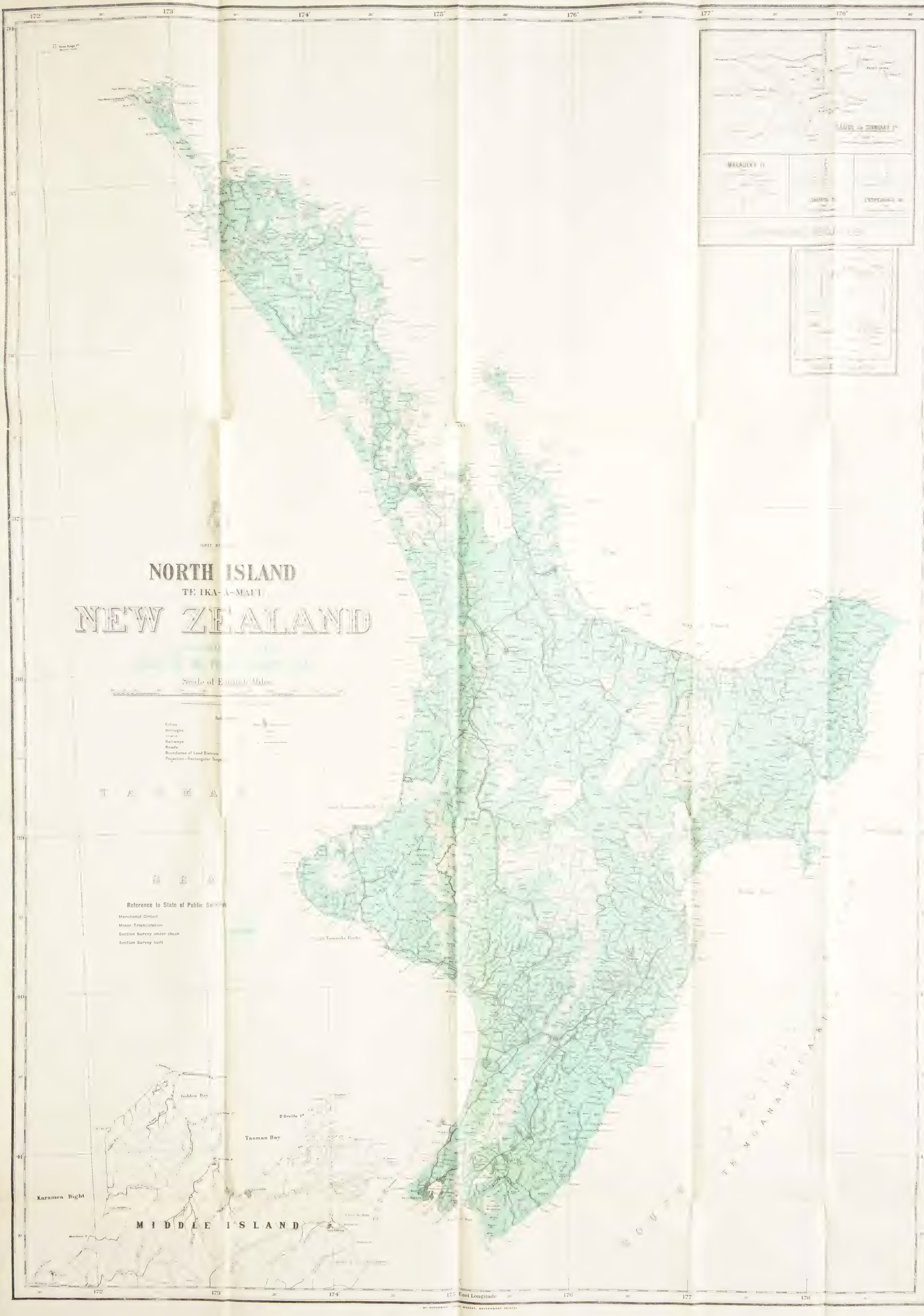
Mangatturoa
Waipuna
Tokirima



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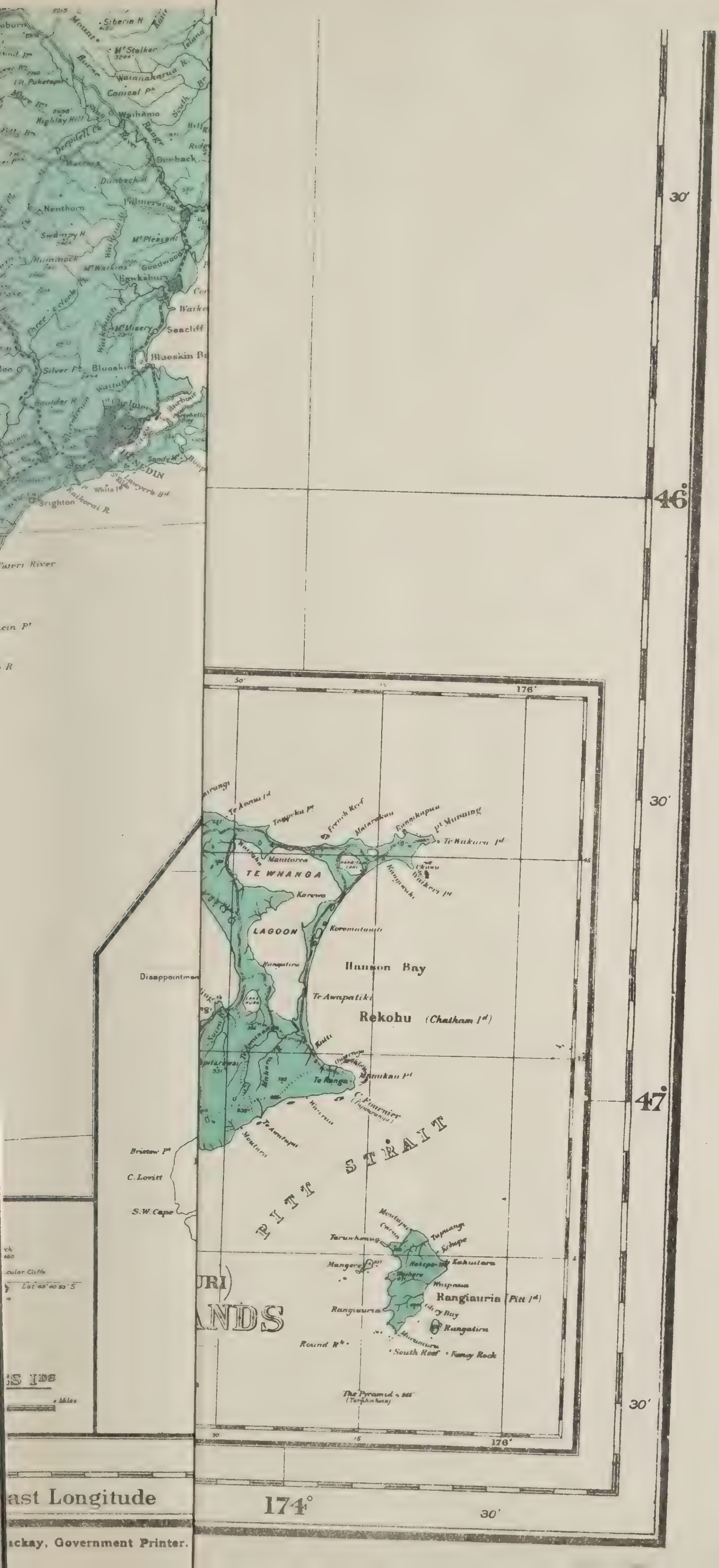

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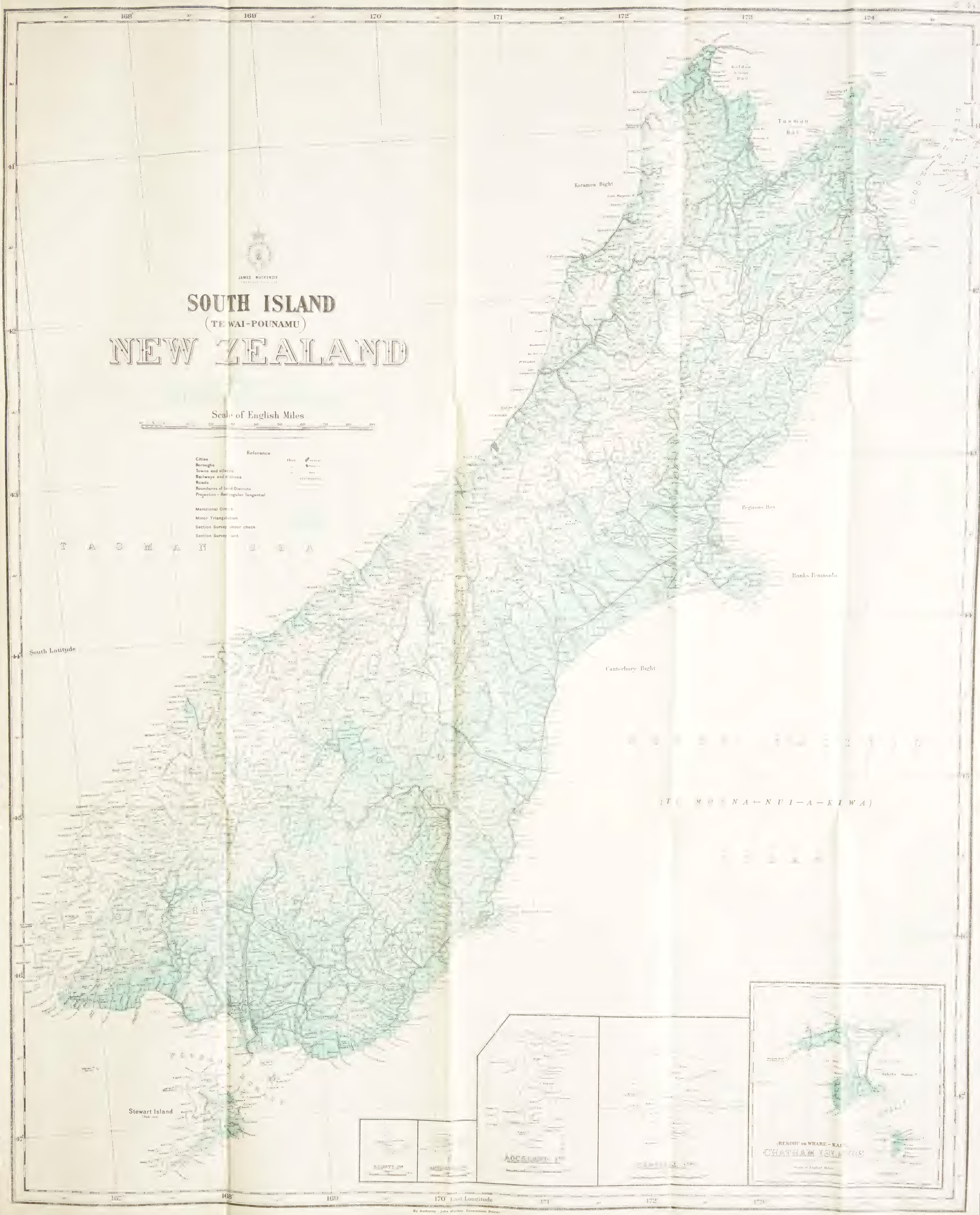

JAMES MACKENZIE

SOUTH ISLAND
(TE WAI-POUNAMU)
NEW ZEALAND

By Authority John Mackay, Government Printer.

1913.
NEW ZEALAND

PURCHASES OF LEASE-IN-PERPETUITY AND RENEWABLE-LEASE HOLDINGS

UP TO 30TH JUNE, 1913, TOGETHER WITH APPLICATIONS NOT COMPLETED.

Laid on the Table of the House of Representatives by Leave.

Purchase of Leases in Perpetuity and Renewable Leases under the Land Laws Amendment Act, 1912.

Land District.	Holdings actually purchased.						Conversions to Deferred Payment.					
	Leases in Perpetuity.		Renewable Leases.		Totals.		Leases in Perpetuity.		Renewable Leases.		Totals.	
	No.	Area.	No.	Area.	No.	Area.	No.	Area	No.	Area.	No.	Area.
		A. R. P.		A. R. P.		A. R. P.		A. R. P.		A. R. P.		A. R. P.
Up to 31st March, 1913.												
Auckland	8	731 1 6	..	..	8	731 1 6	..	..	..	..	..	..
Taranaki	10	1,939 2 38	..	..	10	1,939 2 38	..	..	..	..	..	..
Wellington	23	3,963 2 31	..	..	23	3,963 2 31	..	..	..	..	..	..
Nelson	3	652 1 13	..	..	3	652 1 13	..	..	..	..	..	..
Marlborough	3	97 0 0	..	..	3	97 0 0	..	..	..	..	..	..
Canterbury	4	196 2 8	..	..	4	196 2 8	..	..	..	..	..	..
Southland	28	4,052 3 21	..	..	28	4,052 3 21	6	154 2 33	..	..	6	154 2 33
Totals	79	11,633 1 37	..	..	79	11,633 1 37	6	154 2 33	..	..	6	154 2 33
From 1st April to 30th June, 1913 (Three Months).												
Auckland	34	4.580 1 8	2	10 3 30	36	4,591 0 38	8	1,816 3 19	10	971 3 27	18	2,788 3 6
Hawke's Bay	4	806 1 0	..	..	4	806 1 0	1	70 0 0	3	620 2 0	4	690 2 0
Taranaki	5	1,018 3 15	..	..	5	1,018 3 15	4	1,068 0 0	1	6 2 13	5	1,074 2 13
Wellington	56	3,836 0 20	..	..	56	3.836 0 20	4	526 3 0	..	..	4	526 3 0
Nelson	13	5,823 2 30	..	..	13	5,823 2 30	4	1.166 2 16	..	..	4	1,166 2 16
Marlborough	5	1,733 1 22	..	..	5	1,733 1 22	..	..	..	..	..	..
Westland	5	1,953 0 0	..	..	5	1,953 0 0	5	917 0 0	..	..	5	917 0 0
Canterbury	3	126 3 6	1	0 2 0	4	127 1 6	..	..	..	..	..	..
Otago	9	830 1 37	..	..	9	830 1 37	..	..	..	..	..	..
Southland	27	2.426 1 0	..	..	27	2,426 1 0	16	1,367 3 24	..	..	16	1,367 3 24
Totals	161	23.135 0 18	3	11 1 30	164	23,146 2 8	42	6,933 0 19	14	1,599 0 0	56	8,532 0 19
Totals up to 30th June, 1913	240	34.768 2 15	3	11 1 30	243	34.780 0 5	48	7.087 3 12	14	1.599 0 0	62	8.686 3 12

John Strauchon,
Under-Secretary for Crown Lands.

[illegible] 1914

PURCHASE OF THE FREEHOLD OF LEASE-IN-PERPETUITY AND RENEWABLE-LEASE HOLDINGS UNDER THE LAND LAWS AMENDMENT ACT, 1912.—APPLICATIONS RECEIVED BUT TRANSACTIONS NOT COMPLETED AT THE 30TH JUNE, 1913.

Land District.	Applications to purchase for Cash.				Applications to purchase on Deferred Payment.				Total.			
	No.	Area.			No.	Area.			No.	Area.		
		A.	R.	P.		A.	R.	P.		A.	R.	P.
Leases in Perpetuity.												
Auckland	16	2,020	0	5	13	1,454	3	17	29	3,474	3	22
Hawke's Bay	9	4,053	2	1	..	..			9	4,053	2	1
Taranaki	..	..			5	929	0	0	5	929	0	0
Wellington	28	3,047	0	3	8	1,853	0	3	36	4,900	0	6
Nelson	3	1,696	1	30	4	1,027	3	10	7	2.724	1	0
Marlborough	1	104	0	0	..	..			1	104	0	0
Westland	4	873	0	0	3	1,627	0	0	7	2,500	0	0
Canterbury	3	441	2	38	..	..			3	441	2	38
Otago	4	808	1	21	..	..			4	808	1	21
Southland	5	859	2	37	2	12	3	4	7	872	2	1
Totals	73	13.903	3	15	35	6,904	1	34	108	20,808	1	9
Renewable Leases.												
Auckland	18	8,121	0	12	48	4,486	1	10	66	12,607	1	22
Nelson	1	778	0	0	..	..			1	778	0	0
Canterbury	..	..			1	25	1	12	1	25	1	12
Southland	1	0	2	12	..	..			1	0	2	12
Totals	20	8.899	2	24	49	4.511	2	22	69	13,411	1	6
Grand totals	93	22.803	1	39	84	11,416	0	16	177	34.219	2	15

JOHN STRAUCHON,
Under-Secretary for Lands.

Approximate Cost of Paper.—Preparation, not given; printing (1,400 copies), £3.

By Authority: JOHN MACKAY, Government Printer, Wellington.—1913.

Price 3d.]

1913.

NEW ZEALAND.

COMPULSORY TAKING OF ESTATES

(PARTICULARS OF LAW-COSTS PAID BY THE CROWN IN CONNECTION WITH).

Return to an Order of the House of Representatives dated the 8th August, 1913.

Ordered, "That there be laid before this House a return showing—(1) The amount of law-costs paid by the Crown in connection with the compulsory taking of estates under the Land for Settlements Act; and (2) the names of the firms or individuals to whom such costs were paid, and in each case the name of the estate and the dates and periods for which such services were rendered."—(Mr. SCOTT.)

RETURN showing—(1) The AMOUNT of LAW-COSTS paid by the Crown in connection with the Compulsory Taking of Estates under the Land for Settlements Act; (2) the NAMES of the FIRMS or INDIVIDUALS to whom such COSTS were paid, and in each Case the NAME of the ESTATE and the DATES and PERIODS for which such Services were rendered. (Disbursements included in the Bills of Costs are also shown.)

Estate.	Paid to	Amount.			Period of Service.
		£	s.	d.	
Ardgowan ...	Fraser, J. F. M.	114	15	9	11/8/1895 to 6/9/1895
	Disbursements	1	1	7	
Carrington ...	Findlay, D. M.	318	18	5	8/1/1908 „ 16/7/1908
	Disbursements	7	17	9	
	Dalziell and Findlay	7	7	0	15/10/1907 „ 13/12/1907
	Myers, M.	3	6	6	15/3/1909 „ 26/3/1909
	Disbursements	0	3	6	
	Maunsell and Hart	18	10	3	7/2/1908 „ 14/2/1908
Culverden ...	Dalziell and Findlay	7	8	9	2/11/1907 „ 11/12/1907
	Findlay, D. M.	545	6	10	6/1/1908 „ 26/1/1909
	Disbursements	39	2	2	
	Cassidy, J. A.	93	4	1	13/3/1908 „ 29/8/1908
	Disbursements	0	17	11	
Flaxbourne ...	Findlay, Dalziell, and Co.	1,350	12	10	7/2/1903 „ 2/9/1905
	Disbursements	160	8	6	
	Stringer, T. W.	311	14	0	3/12/1903 „ 18/12/1903
	Disbursements	14	14	0	
	McCallum, R.	932	15	8	30/1/1904 „ 31/10/1906
	Disbursements	10	12	2	
	Mondy, Sim, and Stephens... ...	1,022	8	4	31/10/1904 „ 21/4/1905
	Disbursements	10	8	1	
Forest Gate ...	Findlay, Dalziell, and Co.	357	19	7	9/5/1901 „ 4/8/1903
	Disbursements	15	19	5	
Hatuma ...	Kennedy and Lusk	45	1	8	13/9/1898 „ 27/9/1898
	Baldwin, P. E.	537	12	6	27/9/1897 „ 21/2/1900
	Disbursements	40	8	1	
	Findlay, Dalziell, and Co.	1,963	6	4	24/9/1897 „ 15/8/1901
	Disbursements	345	9	1	
	Sainsbury, Logan, and Williams (as agents for owners)	300	0	0	27/2/1900 „ 15/8/1900
	Cotterill, A. J.	14	15	0	10/4/1897 „ 30/4/1903

Return showing (1) the Amount of Law-costs paid by the Crown in connection with the Compulsory Taking of Estates under the Land for Settlements Act, etc.—*continued.*

Estate.	Paid to	Amount.			Period of Service.
		£	s.	d.	
Kumeroa	Findlay, Dalziell, and Co.	357	1	10	30/5/1901 to 4/12/1902
	Disbursements	34	9	4	
	Cotterill and Humphries	6	5	0	16/12/1902 „ 31/12/1902
Matamata	Tole, J. A.	343	15	0	1/12/1903 „ 25/1/1904
	Disbursements	133	18	0	
Milbourne and Te Reinga	Findlay, Dalziell, and Co.	623	5	10	12/11/1901 „ 31/1/1905
	Disbursements	255	4	8	
	Lusk, H. B.	168	17	0	7/3/1902 „ 29/1/1903
	Disbursements	38	0	0	
	Sainsbury, Logan, and Williams	55	0	0	1/12/1901 „ 29/4/1902
	Disbursements	4	13	4	
	Mackrell, Maton, Godlee, and Quincey	21	1	6	11/3/1903 „ 6/6/1903
Mount Vernon	Findlay, Dalziell, and Co.	590	9	6	25/2/1904 „ 8/7/1906
	Disbursements	64	6	6	
	Lusk, H. B.	237	19	0	8/4/1904 „ 2/5/1904
	Disbursements	6	4	5	
	Cotterill, A. J.	5	8	6	17/9/1901 „ 30/9/1901
	Disbursements	3	6	6	
Tawaha	Skerrett, Wylie, and Weston	30	0	0	–/17/1906
	Disbursements	10	19	11	
	Findlay, Dalziell, and Co.	333	9	10	19/11/1904 „ 12/12/1905
	Disbursements	15	1	0	
	Card, J. W.	83	18	6	17/6/1905 „ 24/6/1905
	Gray and Jackson	7	1	0	6/11/1904
Te Arai	Dalziell and Findlay	504	4	0	17/6/1907 „ 29/11/1907
	Disbursements	51	4	10	
	Nolan, J. W.	5	19	2	31/8/1907 „ 2/11/1907
	Disbursements	0	2	8	
Waimana	Tole, J. A.	122	14	0	9/5/1906 „ 12/1/1907
	Disbursements	3	12	0	
	Total (including disbursements)	12,587	8	6	
	Disbursements	1,268	5	5	

John D. Ritchie,
Chairman, Board of Land-purchase Commissioners.

Wellington, 25th September, 1913.

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1913.
NEW ZEALAND.

NATIONAL-ENDOWMENT LANDS

(PARTICULARS RESPECTING).

Return to an Order of the House of Representatives dated the 5th September, 1913.

Ordered, "That there be laid before this House a return showing, as to each provincial district—(1) The area of endowment land; (2) the area of such under lease; (3) the number of lessees; and (4) the number of persons leasing between 100 and 200 acres, 200 and 300 acres, and so on in subdivisions of a hundred, up to the maximum holding."—(Sir W. C. Buchanan.)

Return to an Order of the House of Representatives showing, as at the 5th September, 1913, (A) the Area of National-endowment Land in each Land District, the Area of such under Lease, and the Number of Lessees; and (B) the Number of Persons Leasing between 101 and 200 Acres, 201 and 300 Acres, and so on in Subdivisions of a Hundred Acres of the Endowment, up to the Maximum Holding.

(A.) *The Total Area in the National Endowment, the Area under Lease, and the Number of Lessees at 5th September, 1913.*

Land District.	Area in National Endowment.			Area under Lease.			Number of Lessees.
	A.	R.	P.	A.	R.	P.	
Auckland	1,011,684	0	0	326,440	0	0	529
Hawke's Bay	309,377	2	19	214,988	2	12	116
Taranaki	94,999	0	28	50,275	0	23	121
Wellington	122,372	2	34	78,337	0	32	396
Nelson	1,089,113	2	27	252,794	2	15	668
Marlborough	557,720	1	34	539,678	1	34	178
Westland	787,488	0	19	443,925	3	8	787
Canterbury	1,466,178	2	22	1,440,446	1	35	119
Otago	2,423,097	0	0	2,392,066	0	0	555
Southland	755,845	0	21	755,438	2	35	214
Totals	8,617,876	2	4	6,494,390	3	34	3,683

(B.) *The Number of Persons leasing between 101 and 200 Acres, 201 and 300 Acres, and so on in Subdivisions of a Hundred Acres of the Endowment, up to the Maximum Holding, in each Land District.*

Number of Persons leasing National-endowment Land, under Subdivisions of 100 Acres.

Land District.	101–200.	201–300.	301–400.	401–500.	501–600.	601–700.	701–800.	801–900.	901–1,000.	1,001–1,100.	1,101–1,200.	1,201–1,300.	1,301–1,400.	1,401–1,500.	1,501–1,600.	1,601–1,700.
Auckland ..	136	65	54	33	28	13	14	7	8	5	3	1	2	2	2	..
Hawke's Bay ..	26	1	1	4	7	4	2	1	1	2	1	1	..	2	1	..
Taranaki ..	41	10	10	12	9	10	5	5	3	1	1	2	..	3	..	..
Wellington ..	20	11	12	6	2	5	2	4	3	..	3	4	2	1	1	2
Nelson ..	91	73	47	75	36	35	18	10	27	5	4	3	4	2	1	1
Marlborough ..	8	15	11	11	4	4	2	4	4	4	1	3	1	1	..	1
Westland ..	163	81	45	18	15	8	4	2	2	..	1	1	..	1	..	..
Canterbury ..	6	1	1	..	3	..	..	1	3	2	..	1	1	..	1	..
Otago ..	45	25	21	20	14	10	12	9	9	7	8	10	6	3	5	4
Southland ..	36	29	5	4	2	1	1	1	..	1	1	..	1	1	..	1
Totals ..	572	311	207	183	120	90	60	44	60	27	23	26	17	16	11	9

Land District.	1,701–1,800.	1,801–1,900.	1,901–2,000.	2,001–2,100.	2,101–2,200.	2,201–2,300.	2,301–2,400.	2,401–2,500.	2,501–2,600.	2,601–2,700.	2,701–2,800.	2,801–2,900.	2,901–3,000.	3,001–3,100.	3,101–3,200.	3,201–3,300.
Auckland ..	..	..	..	2	..	1	..	..	1	..	2	..	..	..	..	..
Hawke's Bay ..	2	..	2	..	..	2	3	6	2	1	..	2	3	3	1	3
Taranaki ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Wellington ..	2	1	..	..	1	..	1	..	1	1	..	..	..	..	..	..
Nelson ..	..	..	4	..	..	..	..	..	..	..	..	..	1	..	..	..
Marlborough ..	1	1	1	..	..	..	..	1	1	1	..	3	..	1	3	2
Westland ..	2	2	1	..	1	1	1	1	..	1	1	3	..	..	1	1
Canterbury ..	5	2	2	..	1	1	3	..	1	2	1	2	..	..	..	2
Otago	8	1	4	4	5	3	3	3	2	4	2	8	7	1	6	3
Southland ..	..	..	..	1	..	1	..	..	..	..	..	..	..	..	1	..
Totals ..	20	7	14	7	8	9	11	11	8	10	6	18	11	5	12	11

Land District.	3,301–3,400.	3,401–3,500.	3,501–3,600.	3,601–3,700.	3,701–3,800.	3,801–3,900.	3,901–4,000.	4,001–4,100.	4,101–4,200.	4,201–4,300.	4,301–4,400.	4,401–4,500.	4,501–4,600.	4,601–4,700.	4,701–4,800.	4,801–4,900.
Auckland ..	..	..	..	..	..	1	..	..	..	..	1	..	..	..	1	..
Hawke's Bay ..	..	1	..	1	..	..	..	1	1	3	..	..	1	..	..	..
Taranaki ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Wellington ..	..	..	1	1	..	..	..	..	..	..	..	..	1	..	..	..
Nelson ..	..	1	..	..	..	..	1	..	1	..	..	..	..	..	..	..
Marlborough ..	..	1	1	..	1	1	2	1	..	..	..	1	1	1	..	..
Westland ..	..	1	..	..	..	..	..	1	..	..	1	..	..	..	..	..
Canterbury ..	3	..	2	1	..	1	..	2	..	2	..	..	3	1	1	..
Otago	3	5	2	2	4	4	5	1	6	3	3	5	3	1	3	3
Southland ..	..	1	..	..	..	1	..	1	..	..	..	..	2	..	..	..
Totals ..	6	10	6	5	5	8	8	7	8	8	5	6	11	3	5	3

Land District.	4,901–5,000.	5,001–5,100.	5,101–5,200.	5,201–5,300.	5,301–5,400.	5,401–5,500.	5,501–5,600.	5,601–5,700.	5,701–5,800.	5,801–5,900.	6,001–6,100.	6,101–6,200.	6,201–6,300.	6,301–6,400.	6,401–6,500.
Auckland ..	..	1	1	..	..	..	..	..	..	..	..	..	1	..	..
Hawke's Bay ..	..	2	..	..	..	..	..	..	..	3	..	..	..	..	..
Wellington ..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..
Nelson ..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Marlborough ..	1	..	..	..	..	..	1	..	..	2	..	..	..	..	..
Westland ..	3	..	..	1	..	..	..	..	..	..	1	..	..	..	1
Canterbury ..	..	..	..	..	..	..	1	..	1	..	..	..	..	1	..
Otago	5	..	1	1	1	2	..	1	2	2	..	2	2	1	3
Southland ..	1	..	..	2	..	..	..	..	..	..	..	..	1	..	..
Totals ..	11	3	2	4	1	2	2	1	3	7	1	2	4	3	4

(B.) *The Number of Persons leasing between 101 and 200 Acres, 201 and 300 Acres, and so on in Subdivisions of a Hundred Acres of the Endowment, up to the Maximum Holding, in each Land District*—continued.

Number of Persons leasing National-endowment Land, under Subdivisions of 100 Acres—*continued.*

Land District.	6,501–6,600.	6,601–6,700.	6,701–6,800.	6,801–6,900.	6,901–7,000.	7,001–7,100.	7,101–7,200.	7,201–7,300.	7,301–7,400.	7,401–7,500.	7,501–7,600.	7,601–7,700.	7,701–7,800.	8,001–8,100.	8,101–8,200.
Auckland ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1
Hawke's Bay ..	..	..	..	1	..	1	..	..	..	..	..	..	..	..	..
Wellington ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Nelson ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Marlborough ..	..	1	..	1	1	..	..	..	1	..	..	..	..	..	..
Westland ..	..	..	..	..	..	..	1	..	..	..	1	1	..	..	1
Canterbury ..	1	1	..	..	..	..	..	..	..	..	..	..	..	..	..
Otago	2	..	1	..	1	..	..	2	1	4	..	1	4	1	..
Southland ..	..	..	1	1	..	2	1	1	..	..	..	..	..	..	..
Totals ..	3	2	2	3	2	3	2	3	2	4	1	2	4	1	2

Land District.	8,201–8,300.	8,301–8,400.	8,401–8,500.	8,501–8,600.	8,601–8,700.	8,701–8,800.	8,801–8,900.	8,901–9,000.	9,001–9,100.	9,101–9,200.	9,201–9,300.	9,301–9,400.	9,401–9,500.	9,501–9,600.	9,601–9,700.
Auckland ..	..	..	..	..	..	..	1	..	..	1	..	..	..	..	..
Hawke's Bay ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1
Nelson ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Marlborough ..	1	..	..	..	..	..	..	..	..	..	..	..	..	1	..
Westland ..	..	1	..	..	..	..	1	..	..	..	1	..	1	..	..
Canterbury ..	..	..	1	..	..	1	1	1	..	..	..	..	..	..	1
Otago	..	1	..	2	1	1	2	..	1	..	..	1	1	..	..
Southland ..	..	..	..	..	..	..	..	1	..	..	..	1	..	..	..
Totals ..	1	2	1	2	1	2	5	2	1	1	1	2	2	1	2

Land District.	9,701–9,800.	9,801–9,900.	9,901–10,000.	10,101–10,200.	10,201–10,300.	10,301–10,400.	10,401–10,500.	10,501–10,600.	10,801–10,900.	10,901–11,000.	11,101–11,200.	11,201–11,300.	11,301–11,400.	11,501–11,600.	11,601–11,700.
Auckland ..	..	..	..	1	..	..	..	..	..	..	1	..	1	..	..
Hawke's Bay ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Nelson ..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..
Marlborough ..	1	..	..	..	1	..	..	..	..	..	..	..	..	..	..
Westland ..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..
Canterbury ..	..	..	..	..	..	..	..	2	..	1	..	1	..	..	..
Otago ..	1	1	1	1	..	1	1	..	..	..	..	..	..	..	1
Southland ..	..	..	..	..	..	..	..	..	1	..	..	..	..	1	..
Totals ..	2	1	3	2	1	1	1	2	1	1	1	1	1	1	1

Land District.	11,701–11,800.	11,801–11,900.	11,901–12,000.	12,201–12,300.	12,701–12,800.	12,801–12,900.	13,401–13,500.	13,501–13,600.	13,801–13,900.	13,901–14,000.	14,101–14,200.	14,201–14,300.	14,401–14,500.	14,901–15,000.	15,001–15,100.
Auckland ..	..	..	1	..	..	..	..	..	..	..	1	..	..	..	..
Hawke's Bay ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Marlborough ..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..
Westland ..	..	..	..	..	..	..	..	1	..	..	..	..	..	2	..
Canterbury ..	1	..	..	..	1	..	..	..	..	2	..	1	1	1	..
Otago ..	1	2	..	1	..	1	2	2	1	..	..	..	1	..	1
Southland ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Totals ..	2	2	1	1	1	1	2	3	1	2	1	1	2	4	1

Land District.	15,101–15,200.	15,201–15,300.	15,301–15,400.	15,401–15,500.	15,501–15,600.	15,701–15,800.	15,901–16,000.	16,001–16,100.	16,101–16,200.	16,201–16,300.	16,501–16,600.	16,801–16,900.	16,901–17,000.	17,101–17,200.	17,201–17,300.
Auckland ..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..
Hawke's Bay ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Marlborough ..	..	..	..	..	..	..	..	1	..	..	..	..	1	..	..
Westland ..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..
Canterbury ..	..	..	1	1	1	..	1	..	1	1	..	..	2	..	..
Otago ..	..	2	..	..	..	..	1	..	..	1	2	..	..	1	1
Southland ..	1	..	..	..	1	1	..	..	..	..	..	1	..	..	..
Totals ..	1	2	1	1	2	1	2	1	1	2	2	2	4	1	1

(B.) *The Number of Persons leasing between 101 and 200 Acres, 201 and 300 Acres, and so on in Subdivisions of a Hundred Acres of the Endowment, up to the Maximum Holding, in each Land District*—continued.

Number of Persons leasing National-endowment Land, under Subdivisions of 100 Acres.

Land District.	17,301–17,400.	17,401–17,500.	17,501–17,600.	17,701–17,800.	17,901–18,000.	18,201–18,300.	18,401–18,500.	18,501–18,600.	18,701–18,800.	19,401–19,500.	19,801–19,900.	19,901–20,000.	20,501–20,600.	20,701–20,800.	21,201–21,300.
Auckland ..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..
Hawke's Bay ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Marlborough ..	1	1	..	..	..	1	..	..	..	..	..	..	..	..	..
Westland ..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..
Canterbury ..	..	..	1	..	1	..	2	..	2	..	1	..	..	1	..
Otago ..	..	..	..	1	..	..	..	1	1	1	..	..	1	..	1
Southland ..	..	..	1	..	..	..	..	..	1	..	..	..	..	..	..
Totals ..	1	1	2	1	1	2	2	1	4	1	1	1	1	1	1

Land District.	21,301–21,400.	21,501–21,600.	21,701–21,800.	21,801–21,900.	22,401–22,500.	22,901–23,000.	23,701–23,800.	24,001–24,100.	24,201–24,300.	24,501–24,600.	25,901–26,000.	26,601–26,700.	26,901–27,000.	27,001–27,100.	27,101–27,200.
Hawke's Bay ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Marlborough ..	..	..	..	1	..	..	..	..	1	..	..	..	..	..	1
Westland ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Canterbury ..	..	..	..	..	1	..	..	..	..	..	1	1	1	1	..
Otago ..	1	1	1	..	..	..	1	..	..	1	..	..	..	1	..
Southland ..	..	..	..	..	..	1	..	1	..	..	..	..	..	..	..
Totals ..	1	1	1	1	1	1	1	1	1	1	1	1	1	2	1

Land District.	27,501–27,600.	27,801–27,900.	28,501–28,600.	28,701–28,800.	28,901–29,000.	29,101–29,200.	29,601–29,700.	29,901–30,000.	30,601–30,700.	30,801–30,900.	30,901–31,000.	32,301–32,400.	32,801–32,900.	32,901–33,000.	33,501–33,600.
Hawke's Bay ..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..
Marlborough ..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..
Westland ..	..	..	..	..	..	..	..	1	..	..	..	..	..	1	..
Canterbury ..	1	..	..	1	1	..	..	..	..	..	1	..	1	..	1
Otago ..	..	..	..	..	..	..	1	1	1	1	..	..	1	..	..
Southland ..	..	..	..	1	..	..	1	..	..	..	..	1	..	..	..
Totals ..	1	..	1	2	1	1	2	2	1	1	1	1	2	1	1

Land District.	33,601–33.700.	34,101–34,200.	35,201–35,300.	35,801–35,900.	36,001–36,100.	36,901–37,000.	37,401–37,500.	38,201–38,300.	39,301–39,400.	42,801–42,900.	44,601–44,700.	46,701–46,800.	49,201–49,300.	49,501–49,600.	50,701–50,800.
Marlborough ..	..	1	1	..	..	..	..	..	..	..	..	..	..	..	..
Canterbury ..	..	..	..	1	..	..	..	..	..	1	..	1	1	..	..
Otago ..	1	..	..	..	1	..	1	..	1	..	..	..	..	1	1
Southland ..	..	..	..	..	..	1	..	1	..	..	1	..	..	..	..
Totals ..	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1

Land District.	51,001–51,100.	54,901–55,000.	55,001–55,100.	55,601–55,700.	56,701–56,800.	58,901–59,000.	61,901–62,000.	68,901–69,000.	76,001–76,100.	86,701–86,800.	90,801–90,900.	96,101–96,200.	101,901–102,000.	108,201–108,300.	122,201–122,300.
Marlborough ..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..
Canterbury ..	..	..	1	..	..	..	1	..	..	..	..	..	1	1	..
Otago ..	1	..	..	..	1	..	..	1	1	1	1	1	..	..	..
Southland ..	..	..	...	1	..	1	..	..	..	..	..	..	..	..	1
Totals ..	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1

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1913.
NEW ZEALAND.

NATIONAL-ENDOWMENT LANDS

(FURTHER PARTICULARS RESPECTING).

Return to an Order of the House of Representatives dated the 3rd October, 1913.

Ordered, "That there be laid before this House a return showing—(1) The total area of endowment lands actually under lease on the 1st September, 1913, in each provincial district; (2) the maximum area leased to any one individual leaseholder; (3) the minimum area leased to any one individual leaseholder; and (4) the total area of endowment lands unleased in each provincial district."—(Sir W. C. BUCHANAN.)

RETURN TO AN ORDER OF THE HOUSE OF REPRESENTATIVES DATED THE 3RD OCTOBER, 1913, SHOWING THE AREA OF NATIONAL-ENDOWMENT LANDS HELD UNDER LEASE, THE MAXIMUM AREA AND THE MINIMUM AREA LEASED TO ANY ONE INDIVIDUAL LEASEHOLDER, AND THE AREA OF THE ENDOWMENT UNLEASED, AS AT THE 1ST SEPTEMBER, 1913.

Land District.	Area held under Lease.			Area leased to any one Individual Leaseholder.				Area unleased.		
				Maximum.	Minimum.					
	A.	R.	P.	A.	A.	R.	P.	A.	R.	P.
Auckland	326,440	0	0	20,000	1	0	32	685,244	0	0
Hawke's Bay	214,988	2	12	28,540	0	1	10	94,389	0	7
Taranaki	50,275	0	23	1,486	3	3	31	44,724	0	5
Wellington	78,337	0	32	6,360	0	1	0	44,035	2	2
Nelson	252,614	2	15	10,000	1	0	0	836,199	0	12
Marlborough	539,678	1	34	54,930	2	0	38	18,042	0	0
Westland	443,925	3	8	33,000	0	0	14	343,562	1	11
Canterbury	1,440,446	1	35	108,300	10	0	0	25,732	0	27
Otago	2,392,066	0	0	96,130	1	0	26	31,009	0	0
Southland	755,438	2	35	122,280	0	3	18	406	1	26
Totals	6,494,210	3	34	...	...			2,123,343	2	10

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1913.
NEW ZEALAND.

NATIONAL-ENDOWMENT LANDS

(RENTS AND ROYALTIES RECEIVED FROM) SINCE 1908.

Return to an Order of the House of Representatives dated the 18th July, 1913.

Ordered, "That there be laid before this House a return showing the total amount of money received by way of rent each year since 1908 from national endowments, also the amounts received by way of royalties for the same period."—(Mr. WITTY.)

RETURN SHOWING TOTAL AMOUNT OF MONEY RECEIVED BY WAY OF RENT EACH YEAR SINCE 1908 FROM NATIONAL ENDOWMENTS; ALSO THE AMOUNTS RECEIVED BY WAY OF ROYALTIES FOR THE SAME PERIOD.

Year (1st April to 31st March).	Gross Amount received.								
	From Rents.			From Royalties.			Totals.		
	£	s.	d.	£	s.	d.	£	s.	d
1908–9	62,344	10	4	13,878	1	5	76,222	11	9
1909–10...	64,791	11	2	14,535	16	7	79,327	7	9
1910–11...	76,953	19	0	18,377	1	9	95,331	0	9
1911–12...	72,653	12	3	18,442	13	3	91,096	5	6
1912–13...	76,264	3	9	18,701	2	5	94,965	6	2
Totals	353,007	16	6	83,934	15	5	436,942	11	11

Department of Lands and Survey, 11th August, 1913.

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1913.
NEW ZEALAND.

NATIONAL-ENDOWMENT LANDS

(RETURN OF) EXCHANGED FOR OTHER LANDS DURING 1911–12 AND 1912–13.

Return to an Order of the House of Representatives dated the 25th July, 1913.

Ordered, "That there be laid before this House a return showing—(1) The total area of national-endowment lands that have been exchanged for other lands, and the district in which such exchanged lands are situated; and (2) the total value of the national-endowment lands exchanged, and also the value of lands taken in lieu thereof, for the years 1911–12 and 1912–13 (separately), ending 31st March in each case."—(Mr. WITTY.)

RETURN SHOWING THE LOCALITY, AREA, AND VALUE OF THE NATIONAL-ENDOWMENT LAND THAT HAS BEEN EXCHANGED FOR OTHER LAND, AND THE VALUE OF THE LAND TAKEN IN LIEU THEREOF, FOR THE YEARS 1911–12 AND 1912–13.

Year ended 31st March.	National-endowment Land exchanged for other Lands.			Value of Land taken in lieu of the National-endowment Land.		
	Locality.	Area.	Value.			
		Acres.	£	£	s.	d.
1912	Waihau and Waitoa Survey Districts, Auckland Land District	24,850*	12,425	12,101	15	0
	Tripp Settlement, Canterbury Land District ...	19,199	1,920	1,920	0	0
	Totals, year 1911–12	44,049	14,345	14,021	15	0
1913	Four Peaks Settlement, Canterbury Land District	10,300	14,620	14,620	0	0
	Acland Survey District (Mount Peel), Canterbury Land District	3,586	9,824	9,824	0	0
	Totals, year 1912–13	13,886	24,444	24,444	0	0
	Grand totals...	57,935	38,789	38,465	15	0

* This area was taken out of the national endowment by section 13 of the Reserves and other Lands Disposal and Public Bodies Empowering Act, 1910, but the area given in exchange comes within the year 1911–12, having been set apart by Proclamation dated the 12th July, 1911.

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UNIVERSITY OF ILLINOIS
4 MAY 1914

1913.
NEW ZEALAND.

FOREST AND SCENIC RESERVES

FROM WHICH RESERVATION HAS BEEN REMOVED SINCE THE 1ST AUGUST, 1912.

Return to an Order of the House of Representatives dated the 5th September, 1913.

Ordered, "That there be laid before this House a return showing, as from the 1st August, 1912, up to date, all areas of forest reserves or scenic reserves from which the reservation has been removed or is in process of being removed with a view of offering such lands for disposal for settlement purposes: such return to give (*a*) the name of each particular reserve or block, (*b*) the area, (*c*) the locality, and (*d*) the information as to whether in each case a report was obtained from a competent authority as to whether it was expedient in the public interest that such reservation should be removed."—(Mr. HANAN.)

RETURN SHOWING THE AREAS OF FOREST OR SCENIC RESERVES FROM WHICH THE RESERVATION HAS BEEN REMOVED OR IN PROCESS OF BEING REMOVED, WITH A VIEW TO OFFERING SUCH LANDS FOR DISPOSAL FOR SETTLEMENT PURPOSES, FROM THE 1ST AUGUST, 1912, TO DATE OF ORDER.

Land District.	Name and Locality.	Area.	Report.
		Acres.	
Auckland ...	State Forest, Whakapaku Parish, Block II, Wangaroa Survey District	1,299	Report by officer of Department favourable to reservation being removed.
〃 ...	Puhipuhi State Forest (part)	11,900	Ditto.
〃 ...	State Forest Reserve, Owhiwa Parish, Block X, Whangarei Survey District	660	〃
〃 ...	State Forest Reserve, Block XV, Maramarua Survey District, Te Kauwhata	150	〃
〃 ...	Scenic Reserve, part Sections 1 and 2, Block XIV, Coromandel Survey District	101	〃
〃 ...	Part Hamurana Scenic Reserve, Rotorua and Rotoiti Survey Districts	3,049	〃
	Total	17,159	
Hawke's Bay...	Forest Reserve, Sections 27 and 28, Block IX, Woodville Survey District	352	〃
Taranaki ...	Growth and preservation of timber reserves:—		
	Omona Survey District—		
	Section 5, Block VII	2,761	〃
	Section 5, Block VIII	3,270	〃
	Opaku Survey District—		
〃 ...	Part Section 13, Block IX	117	〃
〃 ...	Ohura Survey District—		
	Section 9, Block XII	370	〃
	Total	6,518	
Wellington ...	Mangoira State Forest, Blocks XIII and XIV, Ruahine Survey District	1,650	〃
〃 ...	Part Haurangi State Forest, Haurangi Survey District	12,894	〃
〃 ...	Gorge Block, growth and preservation of timber reserve, Blocks I and II, Mangahao Survey District	2,681	
	Total	17,225	

RETURN SHOWING THE AREAS OF FOREST OR SCENIC RESERVES FROM WHICH THE RESERVATION HAS BEEN REMOVED, ETC.—*continued.*

Land District.	Name and Locality.	Area.	Report.
		Acres.	
Nelson ...	Growth and preservation of timber reserves, Sections 3, 14, 15, Block III, 6 and 7, Block VII, and 4, 5 and 6, Block X, Wai-iti Survey District	1,497	Report by officer of Department favourable to reservation being removed.
″ .	Forest Reserve, Sections 16 to 20, 26 and 27, Block VI, and 14, 15, 16, 20, 22, 30, 31, and 34, Block X, Wai-iti Survey District	2,623	Ditto.
″ ...	Reserve for water and forest conservation, Section 3, Block XI, Tadmor Survey District	310	″
	Total	4,430	
Marlborough...	Growth and preservation of timber reserve, Manaroa Saddle, in Block I, Gore, and Block I, Orieri Survey Districts	1,150	″
″ ...	State Forest Reserves, Wakamarina Survey District—		
	Block XIV (Wakamarina Valley) ...	380	″
	″ ″ ...	525	″
	Blocks I, II, III, VI, and VII (Opouri Valley)	5,080	″
	Total	7,135	
Southland ...	State forest reserves in—		
	Block VII, Aparima Hundred... ...	640	″
	Blocks V, VII and XII, Longwood Survey District	160	″
	Block XIX, Jacob's River Hundred ...	1,230	″
	Block XXII, Jacob's River Hundred ...	830	″
	Block II, Forest Hill Hundred ...	270	″
	Total	3,130	
	Grand total	55,949	

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1913.
NEW ZEALAND

AGGREGATION OF LAND

(PAPERS REGARDING).

Laid on the Table of the House of Representatives by Leave.

LAND-AGGREGATION.

Department of Lands and Survey, Wellington, 14th April, 1913.

The Under-Secretary for Lands, Wellington.

As instructed, I have looked into this matter, as disclosed by the attached papers, and have to report on the points mentioned in your note as follows:—

(1.) *Has there been aggregation or not?*

The term "aggregation" is, of course, both vague and elastic, but, allowing for this, I think it may fairly be said that the case of the Burlings, in Aohanga and Mount Cerberus Survey Districts, is a real case of aggregation. The Messrs. W. A. and R. R. Burling have, since the year 1883, acquired 16,190 acres of freehold land, and 1,475 acres of leasehold. If "aggregation" means the acquisition of a greater area than is necessary for the reasonable maintenance of the purchaser and his family, then the Burlings' case is doubtless one of aggregation, although it must be pointed out that there is nothing in the information supplied by the Commissioner of Crown Lands to indicate the class or quality of the land in question. Out of this 16,190 acres, the area purchased by the Burlings direct from the Crown amounts to only 805 acres, and no less than 12,562 acres were alienated from the Crown for cash prior to the year 1888. It is therefore absurd to charge either the present Government or the Department with maladministration.

The case of the Wilsons (Hautapu, &c.) cannot, I think, be placed in the same category as that of the Burlings. There are eight separate owners, who hold altogether an area of 6,658 acres, made up of 4,272 acres freehold and 2,386 acres leasehold. This gives an average of 832 acres for each holder. Whether or not this should be regarded as a case of aggregation largely depends, it seems to me, on the relationship, age, &c., of the various persons, and on these points I have no information.

The Gorringes (Hautapu district) hold a total area of 3,932 acres amongst four persons (average 983 acres), 3,252 acres being freehold and 680 acres leasehold. This cannot, I think, be considered a very glaring case of aggregation, although there is, of course, nothing to prevent it developing into such, unless more stringent legislation be passed.

The cases of the Stuckeys (Hautapu) and the Masons (Hautapu) do not call for any special remark, even the editor of the *Mangaweka Settler* admitting that the areas "aggregated" were only sufficiently large to provide a comfortable living, and that the holders were residing and working the land in a *bona fide* manner.

(2.) *Is the aggregation the result of the passing of the Land Laws Amendment Act, 1912.*

The answer to this is, certainly not. All the purchases of the Burlings were made between June, 1883, and May, 1912. The Wilsons' acquisitions range from 1904 to 1911, and the Gorringes' from 1907 to 1910. Stuckeys' and Masons' acquisitions were also all prior to the passing of the 1912 Act.

The Hon. the Minister of Lands.

THIS report is forwarded for your information, together with report from Ranger Lundius, and also schedules showing searches made in the District Land Registrar's Office, and I trust the position thereby disclosed may be found to be satisfactory in so far as the Land Board and Department are concerned.

9th April, 1913. JOHN STRAUCHON.

(3.) *At what time did aggregation begin and end?*

This is partly answered in the preceding paragraph, from which it will be seen that the aggregation referred to began as long ago as 1883. As to when they will end, of course, largely depends on legislation dealing with the matter being passed.

(4.) *Area held by the Gorringes.*

With regard to the discrepancy between the statement of Mr. Lundius—that the Gorringes "now hold between 6,000 and 7,000 acres of freehold land"—and Mr. Broderick's statement—that the Gorringes hold only 3,932 acres of freehold—I have to state that, upon inquiry, it appears that Mr. Lundius was merely using rough figures, and overestimated the actual area held. I understand from Mr. Broderick that the smaller area (viz., 3,932 acres) is the actual area held by the Gorringes as freehold, as revealed by a careful search of the Land Registry Office.

(5.) *Legal position.*

In regard to the last point raised in your note, I have to say that the statement in the reports of the Commissioner of Crown Lands, Wellington, regarding the law are, to the best of my knowledge, correct.

E. F. Hawthorne.

Rangitikei Aggregation.

Department of Lands.
From Commissioner of Lands Office, Wellington, 7th April, 1913.

The Under-Secretary for Lands, Wellington.

Herewith I forward you a copy of Mr. Lundius' report on the alleged aggregation of land in the vicinity of Mangaweka, from which, coupled with my remarks herein, you will learn that if any undue aggregation has taken place it has been achieved by the purchase of freeholds or converted occupation-with-right-of-purchase sections, over which the Land Board had no control at the time the aggregation took place. I say *if* any undue aggregation has taken place, because a careful search of the titles disclosed that there are many individual owners in each of the blocks that are said to be aggregated—for instance, in the Wilson aggregation of 6,658 acres there are eight separate owners named Wilson, viz.:—

	A.	R.	P.
T. B. Wilson	370	0	0
Amy L. Wilson	200	0	0
C. G. Wilson	1,480	0	0
Q. and J. Wilson	1,605	0	0
George H. Wilson	482	3	16
Robert A. Wilson	450	0	0
Niel D. Wilson	623	0	0
H. C. Wilson, jun.	1,111	0	0
	6,321	3	16
G. H. and N. D. Wilson (education lease)	336	0	0
	6,657	3	16
Gorringe, Mrs. H.	315	0	0
Gorringe, Mrs. M.	177	0	0
Gorringe, F. H. R.	1,943	0	0
Gorringe, H. E.	1,497	0	0
	3,932	0	0
Mason, J. L. Probably the same person	593	3	38
Mason, John	622	0	0
	1,215	3	36
Mason, J. L. (education lease)	517	0	0
	1,732	3	38
Stuckey, J. W. (lease in perpetuity)	600	0	0
Stuckey	511	3	29
	1,111	3	29

I am sending you schedules giving full particulars of the search-notes, from which you will be able to follow every detail of the various purchases and transfers, and so verify what I have said about them.

In my letter of the 6th ultimo I confined myself to refuting the charge that lease-in-perpetuity sections made freehold under the provisions of the Land Laws Amendment Act, 1912, had been aggregated near Mangaweka, but since I received your last communication I have examined every phase of aggregation in that locality, so that I think you may rely on it that the cases quoted are the only ones of any importance.

This agitation against aggregation partakes of the nature of "crying over spilt milk." It is a recrudescence of a similar one that led to the restrictions of Part XIII of the Land Act being placed on all titles to land sold after November, 1907; but, as all the land near Mangaweka was alienated prior to 1900, there is no power in the law to check the aggregation of it.

Large areas held on the occupation-with-right-of-purchase tenure near Mangaweka can be made freehold and aggregated at any time the owners choose to sell, without the Land Board being able to prevent it, but the Land Board always exercises the greatest care to prevent aggregation wherever it has jurisdiction.

Lease-in-perpetuity land purchased under the provisions of the Land Laws Amendment Act is subject to the same restrictions as occupation-with-right-of-purchase land alienated since November, 1907, but it is doubtful whether the restrictions of Part XIII of the 1908 Act are sufficient to prevent all undue aggregation, because much of the land originally classed as second class would now be considered first class; owing, however, to its original classification it can be held up to 2,000 acres by one person without any infringement of the law. It is also manifest that small holdings of first-class land can be aggregated up to 666 acres even in the vicinity of the towns, where from 10 to 50 acres would support a family.

It is extremely difficult to conceive any law that would restrict all undue aggregation by individuals and families without being too restrictive and irksome, but it may be deemed worthy of consideration whether it would not be equitable to burden the freehold of lease-in-perpetuity land with increased restrictions in return for the privilege the lessees have obtained by being allowed to purchase it.

I suggest that the area of converted lease-in-perpetuity that may be held by one person in the vicinity of towns should not exceed 300 acres without the Minister's consent, or, as an alternative, that the Minister's consent must be obtained before such land can be sold to any but landless persons.

T. N. Broderick,
Commissioner of Crown Lands and Chief Surveyor.

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NEW ZEALAND

EXPENDITURE ON ROADS

(RETURN OF) IN EACH DISTRICT DURING 1912–13.

Return to an Order of the House of Representatives dated the 15th August, 1913.

Ordered, "That there be laid before this House a return showing the amounts voted and expended from the 1st April, 1912, to 31st March, 1913, on roads in each road district in the Dominion, showing separately the sums spent on backblock roads and in opening up Crown lands."—(Mr. J. C. THOMSON.)

STATEMENT SHOWING THE AMOUNTS ALLOCATED AND VOTED BY PARLIAMENT, AND AMOUNTS EXPENDED, IN EACH ROAD DISTRICT DURING THE YEAR ENDED 31ST MARCH, 1913.

District.	Roads, &c., Vote.			Backblocks Roads, &c.			Roads on Goldfields.		
	Allocated on Estimates.	Voted on Estimates.	Expended.	Allocated on Estimates.	Voted on Estimates.	Expended.	Allocated on Estimates.	Voted on Estimates.	Expended.
	£	£	£	£	£	£	£	£	£
Whangarei	29,620	..	12,203	22,000	..	6,134	..	..	..
Auckland	120,330	..	44,677	31,770	..	12,276	18,639	..	9,020
Tauranga	11,685	..	1,632	13,200	..	5,233	..	..	..
Gisborne	47,725	..	23,967	39,440	..	18,309	..	..	..
Te Kuiti	24,695	..	9,512	31,300	..	9,956	..	..	..
New Plymouth	17,335	..	11,168	42,925	..	29,450	..	..	..
Wanganui	24,500	..	10,096	27,650	..	12,200	..	..	..
Napier	18,855	..	10,539	800	..	284	..	..	..
Wellington	44,295	..	11,856	15,155	..	4,361	..	..	..
Nelson	24,135	..	10,743	27,000	..	9,468	7,184	..	3,816
Blenheim	19,410	..	12,595	8,975	..	2,092	1,232	..	318
Westport	4,185	..	2,398	6,875	..	3,745	16,051	..	8,231
Greymouth	20,935	..	11,290	19,250	..	8,516	23,121	..	12,067
Christchurch	20,990	..	8,298	5,335	..	3,233	204	..	104
Dunedin	42,720	..	10,715	4,375	..	1,796	5,233	..	1,667
Invercargill	51,685	..	15,508	5,525	..	1,398	1,752	..	900
General	6,400	*328,275	1,940	..	*201,575	..	1,000	*50,600	638
	529,500	*328,275	209,137	301,575	*201,575	128,448	74,416	*50,600	36,761

* The amounts voted cannot be apportioned to the various districts.

STATEMENT SHOWING THE AMOUNTS ALLOCATED AND VOTED BY PARLIAMENT, AND AMOUNTS EXPENDED, IN EACH ROAD DISTRICT DURING THE YEAR ENDED 31ST MARCH, 1913—*continued.*

District.	Opening up Crown Lands.		National Endowment Account.		Maintenance.		Lands for Settlement Account.		Totals.		
	Allocated on Estimates.	Expended.	Allocated on Estimates.	Expended.	Allocated on Estimates.	Expended.	Allocated on Estimates.	Expended.	Allocated on Estimates.	Voted on Estimates.	Expended.
	£	£	£	£	£	£	£	£	£	£	£
Whangarei	6.500	4,394	2.500	..	..	464	..	..	60.620	..	23.192
Auckland	21.550	5.379	900	127	..	2,007	90	90	193.279	..	73.576
Tauranga	4.700	2.942	2.750	150	..	4.565	..	..	32.335	..	14.522
Gisborne	4.750	4.836	2.600	..	..	1.817	442	442	94.957	..	49.371
Te Kuiti	6.900	4.470	1.900	736	..	6,178	..	..	64,795	..	30,852
New Plymouth ..	2.850	945	1.050	501	..	5,655	..	..	64,160	..	47,719
Wanganui	23.550	15.284	2.700	932	..	4,113	..	..	78,400	..	42,625
Napier	1.700	3,758	500	..	..	2,257	648	648	22.503	..	17,486
Wellington	4.750	2,342	..	..	..	71	1	1	64.201	..	18,631
Nelson	2.700	714	2.300	118	..	2,496	97	97	63,416	..	27,452
Blenheim	3.300	556	..	..	..	84	28	28	32.945	..	15,673
Westport	6.400	563	1.000	..	..	3.115	..	..	34.511	..	18,052
Greymouth	850	636	1.000	125	..	6,303	..	..	65.156	..	38,937
Christchurch	200	..	..	..	..	2,923	1,964	1,964	28,693	..	16,522
Dunedin	650	..	..	..	..	..	92	92	53.070	..	14,270
Invercargill	8.650	1.132	..	..	..	200	905	905	68.517	..	20.043
General	..	..	..	..	..	..	..	..	7.100	..	2.578
					42,000				42.000	*745.917	..
	†100.000	47,951	†19.200	2,689	†42.000	42,248	†‡4.267	4.267	1,070.958	*745,917	471,501

* The amounts voted cannot be apportioned to the various districts.
† The amount voted on estimates is the same as the amount allocated.
‡ No appropriation. The amount is expended out of loan for roading. For the purpose of this return the amount expended is deemed to be the amount voted.

Public Works Department, 10th September, 1913.

CHAS. E. BENNETT, Accountant.

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NEW ZEALAND.

THE LAND FOR SETTLEMENTS ACT, 1908

(REPORT ON).

Presented to both Houses of the General Assembly in compliance with Section 85 of the Land for Settlements Act, 1908.

The Land Purchase Inspector to the Minister of Lands.

Sir,—
Wellington, 23rd July, 1913.

I have the honour to submit the report of the Department for the year ending 31st March, 1913.

Land for Settlements.

The number of properties considered during the year was 208, containing an area of 661,211 acres; a considerable proportion being either unsuitable for subdivision, or offered at a price quite beyond their value for settlement purposes.

The area purchased and taken possession of was 52,099 acres freehold, together with about 60,000 leasehold. Two other properties acquired, containing 4,285 acres, have since been disposed of. The actual expenditure was £428,044, making a total of £6,376,155 for 1,349,040 acres.

The estates opened for selection were, with few exceptions, all taken up, but, as stated in the last report, the demand is mainly for grazing country where little or no labour is required.

Further purchases to the extent of 127,592 acres, valued at £462,183, have been completed, and will be dealt with before the end of the financial year.

The area of lands suitable to meet the wants of applicants—*i.e.*, grazing-areas—is becoming more and more circumscribed, and so long as the demand is in this direction such lands will continue to increase in value. Any land suitable for dairying is being held for very high prices.

Land Settlement Finance Act.

During the year there were incorporated ten associations, with a membership of eighty-seven, and an area of 11,354 acres, valued at £185,899. The total number of associations incorporated up to the 31st March last is thirty-four, with a membership of 239, and an area of 35,050 acres, valued at £462,094

Generally speaking, the initial difficulties in connection with such undertakings have been well surmounted. In a few instances some trouble has been experienced, but with the exercise of a little patience matters should right themselves.

The difficulty of arranging finance, and the troubles incidental to the formation of associations under the present Act, are seriously hindering operations. It is hoped that the proposed new Bill will be placed upon the statute-book this session.

Appended are explanatory tables.

I have, &c.
John D. Ritchie.

The Hon. W. F. Massey, Minister of Lands.

Table A.—Summary of all Lands considered by the Government under the Land for Settlements Act, 1908, from 1st April, 1912, to 31st March, 1913.

Land District.	Number.	Area of Estates offered.
		Acres.
Auckland	26	143,323
Hawke's Bay	39	152,736
Taranaki	6	8,238
Wellington	20	42,805
Marlborough	2	81,481
Nelson	3	6,424
Westland	...	...
Canterbury	68	77,742
Otago	20	44,966
Southland	24	103,496
Totals	208	661,211

Table B.—Summary of Estates acquired up to 31st March, 1913.

Land District.	Number.	Area.	Purchase-money.	Incidental Expenses, Improvements, Roads, &c.
		Acres.	£	£
Auckland	28	279,198	455,675	87,883
Hawke's Bay	31	219,963	1,359,697	95,853
Taranaki	4	4,609	79,363	6,160
Wellington	26	60,824	473,999	66,308
Marlborough	9	116,364	355,017	47,709
Nelson	2	24,347	29,975	3,152
Westland	2	5,125	8,343	2,921
Canterbury	96	363,607	2,324,316	94,012
Otago	36	218,081	1,076,343	94,605
Southland	7	56,922	213,387	21,898
Totals	241	1,349,040	6,376,115	520,501

Table C.—Position of the Land for Settlements Account for the Year ending 31st March, 1913.

Dr.	£ s. d.	*Cr.*	£ s. d.	£ s. d.
Cash and instalments	66,039 13 0	Purchase-money		428,044 10 8
Amounts received from New Zealand State-guaranteed Advances Office—		Charges and expenses—		
In terms of section 89 of New Zealand State-guaranteed Advances Act, 1909	399,497 0 0	In connection with estates purchased	16,369 6 10	
		On debentures	10,551 16 5	
		Other expenses	10,061 16 11	
Part proceeds of loan for redemption of debentures matured 1st April, 1912	155,000 0 0			36,983 0 2
Debentures issued	44,000 0 0	Debentures redeemed and renewed		1,413,166 0 0
Debentures matured, redeemed and renewed	1,244,966 0 0	Interest		243,625 4 3
Receipts under Land Act, section 177	13,207 18 7	Sinking fund		66,856 11 7
Receipts under Land Act, section 191	832 12 6	Balance		47,672 0 4
Rents	309,192 17 2			
Recoveries	3,611 5 9			
	£2,236,347 7 0			£2,236,347 7 0

Table D.—Position of the Land for Settlements Account at 31st March, 1913.

Dr.	£	*Cr.*	£
Loans current	6,751,909	Purchase-money	6,376,116
Rents, &c., received	2,830,489	Incidental expenses	574,859
Receipts under Land Act, section 191	7,073	Interest	2,240,062
Receipts under Land Act, section 177	59,700	Sinking fund	410,462
		Balance	47,672
	£9,649,171		£9,649,171

TABLE E.—RETURN OF LANDS PURCHASED FROM 1ST APRIL, 1912, TO 31ST MARCH, 1913.

Name of Owner.	Name of Estate.	Locality.	Price per Acre.	Mode of Acquisition.	Name of Settlement.	Area taken Possession of during Year, and Amount paid.		Area approximately not yet taken Possession of.
						Area.	Paid for Land, &c.	
		TARANAKI.	£ s. d.			A. R. P.	£ s. d.	Acres.
Bee, G.	Tariki	Tariki	4 10 0	By agreement	Tariki	..	..	747
		HAWKE'S BAY.						
Trustees Arihi te Nahu		Hastings	..	,,	Mahora	..	15 0 0*	..
Lethbridge, J. P.	Sherenden	Near Hastings	7 10 0	,,	Sherenden	8,337 2 0	62,531 5 0	..
Hoadley, H. V.	Tunanui	,,	7 10 0	,,		2,000 0 0	15,000 0 0	..
Peacock, W. M. H. McRae	Waihau	Near Napier	5 5 0	,,	Waihau	6,162 2 0	32,353 2 6	..
Hartree, H. and H. A.	Ngaroto	,,	4 7 6	,,		9,228 0 0	40,372 10 0	..
Mills, William	Raumati (part)	,,	4 15 0	,,		820 0 24	3,895 14 3	..
						26,548 0 24	154,167 11 9	..
Less adjustments, rates, &c.	..	..	..	..	..	..	232 11 4	..
							153,935 0 5	
		CANTERBURY.						
Wright, William	Aylesbury	Kirwee	16 0 0	,,	Aylesbury	1,002 2 11	16,041 2 0	..
Studholme, E. C. and E. M. L.	Te Waimate	Waimate	16 2 6	,,	Waimate	1,667 1 25	26,886 19 4	..
Irwin, J.	..	Rakaia	14 0 0	,,	Avenel Extension	521 0 0	7,294 0 0	..
Lowe, W. T.	..	,,	13 10 0	,,		1,327 1 16	18,141 2 10	..
Sealey, T.	Bourndale	Makikihi	13 12 6	,,	Bourndale	1,575 3 0	21,469 11 10	..
Crown lands added			8 0 0	,,		49 3 20	399 0 0	..
Rosendale, H. T.	Claremont	Near Timaru	13 0 0	,,	Claremont	2,336 2 20	30,376 2 6	..
Scott, W.	..	Near Southburn	12 15 0	,,	Timaunga Extension	1,089 2 0	13,891 2 6	..
Patterson, J.			12 5 0	,,		612 3 0	7,506 3 9	..
Lavers, W. J. and E. B., and Blair, D. J.			11 5 0	,,		459 1 20	5,167 19 4	..
Jones, E.	Mount Nessing	Near Albury	..	,,	Mount Nessing	5,985 1 20	43,000 0 0†	..
Hamilton, W. F.	Ashwick Flat	Near Fairlie	5 10 0	,,	Ashwick	5,620 0 19	30,910 13 0‡	..
Simmons, W. H.	Strathmore	Near Hinds	6 0 0	,,	Strathmore	1,401 1 24	8,408 8 0	..
Leadley, G.	Valverde	Wakanu	12 0 0	,,	Valverde	..	13,687 6 0§	..
						23,649 0 15	243,179 11 1	
Less adjustments, rates, &c.	..	..	..	..	..	..	137 16 8	
							243,041 14 5	
		OTAGO.						
Telford, T.	Otanomomo	Near Balclutha	17 0 0	,,	Otanomomo	1,818 2 31	30,917 15 10	..
Crown lands added	..	Pomahaka	..	,,	Conical Hills	83 0 0	150 0 0	..
						1,901 2 31	31,067 15 10	
		SOUTHLAND.						
Cameron, D., and McAuley, J.	Maori Hill	Tuatapere	7 5 0	,,	Maori Hill	..	..	3,538
						52,098 3 10	428,044 10 8	4,285

* For land for drainage. † Including goodwill of 29,000 acres leasehold. ‡ Including goodwill of 30,000 acres leasehold. § Balance purchase-money.

TABLE F.—ESTATES ACQUIRED SINCE 31ST MARCH, 1913, OR PURCHASED BEFORE AND NOT DEALT WITH.

Name.	Locality.	Area.	Price.	Possession.
		Acres.	£	
Ohauiti	Tauranga, Auckland	4,856	18,212	April, 1913.
Balachraggan	Waitoa, Auckland	1,420	14,200	July, 1913.
G. Bee's	Tariki, Taranaki	747	10,838	April, 1913.
J. R. Macdonald's	Levin, Wellington	600	21,000	August, 1913.
Poroporo	Near Masterton, Wellington	3,760	30,080	February, 1914.
Brancepeth	Wairarapa	5,480	30,080	„ „
Hillersden	Wairau Valley, Marlborough	78,000	165,750*	March, 1914.
Lake Run	Tophouse, Nelson	2,946	4,400†	May, 1913.
Lansdowne	Near Waimate, Canterbury	820	12,300	March, 1914.
Tara	Waihaorunga, Canterbury	3,624	31,710	„ „
Hohenfeldt	Waituna, Canterbury	1,254	17,556	„ „
Clare View	Herbert, Otago	758	10,233	July, 1913.
Rattray Bros.	Georgetown, Otago	663	9,290	„ „
Maori Hill	Tuatapere, Southland	3,538	25,653	April, 1913.
Ardlussa	Balfour, Southland	6,450	33,862‡	March, 1914.
Waiarikiki	Mataura, Southland	4,113	18,508	„ „
Knowsley Park	Mataura, Southland	4,950	19,181	„ „
Fortification Hill	Waimahaka, Southland	3,613	11,290	„ „
		127,592	462,183	

* Including leasehold, 80,000 acres. † Including leasehold, 2,786 acres. ‡ Including leasehold, 6,000 acres.

TABLE G.—LAND-SETTLEMENT FINANCE ASSOCIATIONS INCORPORATED UP TO 31ST MARCH, 1913.

Association.	Locality.	Name of Owner.	Area.	Purchase-money.	Number of Members.	Area of Allotment.
	AUCKLAND.		Acres.	£		Acres.
Eureka	Eureka	G. Howie	824	15,870	5	100, 188, 200, 185, 151.
Tainui	Matangi	W. Ranstead	466	6,520	5	112, 50, 50, 82, 172.
Komata South	Komata South	Hubbards and Hubbards's executors	658	9,990	5	176, 158, 89, 104, 131.
Hikutaia	Hikutaia	G. Alley	839	7,663	8	180, 180, 129, 110, 145, 95.
Melrose	Te Aroha	G. W. Mace	858	6,466	5	169, 169, 176, 176, 168.
Martha	Hinuera	McGuire and Miller	1,698	10,245	10	174, 172, 184, 184, 185, 198, 200, 100, 101, 200.
Glengariff	Ohaupo	Greenslade, Mrs.	1,088	15,237	9	152, 185, 130, 155, 156, 208, 102.
Dunlop	Kaipaki	Sturges, W. N.	450	5,967	5	110, 123, 63, 76, 78.
Waipa	Te Awamutu	McGovern, F.	678	11,186	5	100, 101, 138, 176, 163.
Mimosa Downs	Walton	Hutchinson, C. Q.	1,009	8,582	7	196, 130, 270, 170, 243.
Walton	„	Butler, R.	1,182	13,003	9	200, 200, 200, 205, 117, 138, 122.
Waitangi	Waiuku	Sinclair, W. F.	1,014	9,637	5	200, 200, 205, 205, 204.
Pukekawa	Pukekawa	Morrison, R. E.	690	4,840	6	150, 133, 150, 53, 204.
			11,454	125,206	84	
	HAWKE'S BAY.					
Korokipo	Korokipo	J. E. Lane	670	16,630	7	64, 102, 79, 162, 101, 112, 50.
	WELLINGTON.					
Nikau Grange	Ashhurst	Messrs. Fraser	672	18,830	6	130, 141, 145, 133, 123.
Moorfield	Kimbolton	E. H. Crabbe	807	16,948	5	150, 184, 191, 150, 132.
			1,479	35,778	11	
	CANTERBURY.					
Brookland	Winchester	R. Brookland	400	9,621	5	53, 68, 93, 65, 121.
Waitohi Downs	Temuka	D. Shaw, jun.	1,021	12,636	6	178, 197, 200, 223, 223.
Melville Downs	Fairlie	Black, William	1,023	12,280	5	197, 224, 198, 208, 196.
Gleniffer	Beautiful Valley	Macaulay, A., and Mrs. Dick	852	10,277	5	160, 200, 164, 164, 164.
Wentnor	„	North, W. B.	1,113	12,248	5	207, 207, 206, 218, 275.
Chastleton	Pleasant Valley	Harris, E.	1,528	10,885	5	279, 333, 335, 276, 305.
			5,937	67,947	31	
	SOUTHLAND.					
Merrivale No. 1	Merrivale	Ellis, J. C.	2,276	16,560	11	305, 376, 293, 178, 250, 199, 169, 257, 249.
„ No. 2	„	„	1,880	14,074	8	184, 157, 297, 310, 275, 315, 342.
			4,156	30,634	19	
			23,696	276,195	152	
Incorporated 1912–13			11,354	185,899	87	
			35,050	462,094	239	

TABLE H.—LAND-SETTLEMENT FINANCE ASSOCIATIONS INCORPORATED FROM 1ST APRIL, 1912, TO 31ST MARCH, 1913.

Association.	Locality.	Name of Owner.	Area.	Purchase-money.	Number of Members.	Area of Allotments.
	AUCKLAND.		Acres.	£		
Moana Vale ..	Roto-o-rangi ..	Paine, F. ..	1,812	13,474	11	150, 150, 141, 190, 200, 300, 262, 420.
Lansdowne ..	Walton ..	Mapp, F. H. and W.	773	8,506	7	160, 159, 118, 124, 212.
Woodside ..	Matangi ..	Goodwin, E. G. W. and A.	1,294	24,583	11	170, 130, 153, 100, 78, 101, 195, 92, 83, 141, 51.
			3,879	46,563	29	
	HAWKE'S BAY.					
Matamau ..	Matamau ..	Lloyd, T. H. G., and Tansey, M.	1,459	24,789	12	112, 114, 127, 114, 166, 181, 188, 141, 122, 194.
	WELLINGTON.					
Auchmore ..	Okoia	McGregor, J. ..	633	14,570	7	120, 101, 100, 115, 64, 55, 78.
Glencairn ..	Turakina ..	Bruce, J. ..	1,599	33,567	6	28, 25, 61, 105, 110.
Quilltowen ..	Wanganui ..	Whiteman, E. H. ..	329	11,587	8	178, 52, 140, 75, 147, 143, 171.
Otauiri ..	Hunterville ..	Simpson, R. K., A. G., and R. K. jun.	906	21,524	12	95, 135, 184, 199, 147, 169, 199, 186, 94, 95, 95.
			3,467	81,248	33	
	MARLBOROUGH.					
Clifton Grove ..	Lower Wairau ..	Haywood, A. E. ..	368	15,307	5	70, 65, 38, 41, 71, 83.
	CANTERBURY.					
Owersby ..	Fairlie ..	Dixon, R. A. ..	2,181	17,992	8	213, 248, 252, 256, 242, 284, 385, 301.
			11,354	185,899	87	

TABLE I.—LAND-SETTLEMENT FINANCE ASSOCIATIONS UNDER NEGOTIATION AT 31ST MARCH, 1913.

Association.	Members.	Date of Agreement.	Name and Address of Vendor.	Area.	Price.
AUCKLAND.				Acres.	£
Paparamu	5	16/11/12	Death, W. A. and E. A., Paparamu..	892	10,984
Ngaroto	..	..	Platt, W.. Ngaroto	614	11,052
HAWKE'S BAY.					
Blairgowrie*	11	1/3/13	Ross, R. B., Woodville	1,483	23,682
CANTERBURY.					
Kelman*	6	28/5/13	Kelman, A. W., F. B., and J. A., Lowcliffe	864	13,283
Trentham*	7	19/3/13	Langridge, A. G., and Crampton, G. W.	1,630	15,485
OTAGO.					
Bruce*	5	18/2/13	Bruce, G., Kakanui	206	6,368

* Since approved.

TABLE J.—LAND-SETTLEMENT FINANCE ASSOCIATIONS DECLINED AT 31ST MARCH, 1913.

Association.	Members.	Date of Agreement.	Name and Address of Vendor.	Area.	Declined.
AUCKLAND.				Acres.	
Otterburn..	8	11/6/12	Meares, T. A. and W. C., Walton ..	992	7/9/12
..	..	..	Manuel, C., Matamata	3,000	4/4/13
Innisfallen	9	..	Hopkirk, A., Cambridge	998	18/2/13
..	..	..	Slater, J., Pukekawa	2,000	2/4/12
MARLBOROUGH.					
Robin Hood Bay	6	..	Stace, H. J.	871	3/6/13
OTAGO.					
..	5	..	Macaulay, M. A., and O'Brien, F., Maheno	376	20/3/13

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C.—6.

NEW ZEALAND.

DEPARTMENT OF LANDS AND SURVEY.

REPORT

ON

SCENERY-PRESERVATION

FOR THE

YEAR 1912-13.

BY

JOHN STRAUCHON, I.S.O.,
UNDER-SECRETARY.

WELLINGTON.
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NEW ZEALAND.

DEPARTMENT OF LANDS AND SURVEY:

SCENERY-PRESERVATION.

REPORT FOR THE YEAR ENDED 31st MARCH, 1913: TOGETHER WITH STATEMENT OF ACCOUNTS AND SCHEDULE OF LANDS ACQUIRED AND RESERVED DURING THE YEAR UNDER THE SCENERY PRESERVATION ACTS.

Presented to both Houses of the General Assembly pursuant to Section 17 of the Scenery Preservation Act, 1908.

Department of Lands, Wellington, 2nd June, 1913.

SIR,—

I have the honour to submit herewith report on scenery-preservation for the twelve months ended the 31st March, 1913.

I have, &c.,
JOHN STRAUCHON,
Under-Secretary for Lands.

The Hon. W. F. Massey,
Minister in Charge of Scenery-preservation.

REPORT.

RESERVATIONS DURING YEAR.

DURING the twelve months ended the 31st March, 1913, an area of 55,140 acres, in fifty-nine reserves, was set aside under the Scenery Preservation Act, 1908, for scenic, historic, and thermal-springs purposes.

There had previously been reserved an area of 159,808 acres, but during the year the reservation over 3,386 acres was revoked, so that the net area reserved on the 31st March, 1913, was 211,562 acres, contained in 318 separate reservations.

Included in the area reserved during the year was the beautiful Manga-o-Kewa Gorge, near Te Kuiti, a portion of which can be viewed from the Waiteti Viaduct on the Main Trunk line; the Waikite Hot Springs, Ohinemutu, were also secured; a portion of the ramparts and fortifications of the Rangiriri Pa were acquired; the land around the celebrated Te Reinga Falls, near Wairoa, Hawke's Bay, was permanently reserved, and several patches of beautiful bush on the banks of the Waitotara River, in the Rangitatau Block, were set aside. Two patches of bush adjoining the Waimarino Railway-station, Main Trunk line, and an area of magnificent forest adjoining the railway-line close to the Kaitoke Railway-station, on the slopes of the Rimutaka Hills, were likewise set aside under the Act. The greatest area of reservation was recorded in the Nelson District, where 45,000 acres of hilly and mountainous forest country, chiefly on the banks of the Buller River, were proclaimed for scenic preservation. The maintenance of the banks of the Buller Gorge under forest covering is most important, so as to prevent denudation of soil from the surrounding country. In addition, two patches of bush adjoining the French Pass on D'Urville Island, and many other areas of forest-covered land in various parts of the Dominion, were acquired and preserved on account of their exceptional beauty.

Thanks to the efforts of Mr. H. G. Ell, M.P., and several enthusiastic lovers of scenery around Christchurch, two more areas of land on the Port Hills were purchased and reserved for scenic purposes, the purchase-money being found by these gentlemen. The two areas are named respectively Coronation Hill and Hoon Hay Park, and from them magnificent views of the Lyttelton Harbour and surrounding country can be obtained. The control of this land has been handed over to the Summit Road Scenic Board, who were largely instrumental in securing these additional lands, and whose efforts to preserve the scenery in this locality have been of great assistance in this respect.

As a result of negotiations with the owner of the land adjoining the Wairarapa Lake (Mr. Matthews), an area of 67½ acres was acquired by way of exchange and reserved for scenic purposes.

Most of the land that has been reserved during the year is Crown land of a rough and broken character, largely unfitted for farming operations.

EXPENDITURE.

The gross expenditure during the year amounted to £17,351, but as £508 was recovered, the net expenditure was £16,842, as set forth in the statement of accounts appearing in Appendix A.

Every care has been taken to expend the funds of the scenery-preservation vote to the utmost advantage, and no land has been recommended for reservation until it has been carefully viewed and reported upon, and every precaution taken that the interests of settlement are not detrimentally affected, but that the land is well worthy of preservation on account of its picturesqueness, and calculated to remain a permanent asset to the scenic beauty of the Dominion.

Comparison of Expenditure.

Year.	Compensation for Land.	Fencing and Maintenance.	Surveys, Valuations, &c.	Board's Expenses.	Salaries.	Total.
	£	£	£	£	£	£
1904–5	216	Nil	52	1,822	*	2,090
1905–6	3,336	,,	527	1,221	*	5,084
1906–7	7,856	304	801	185	*	9,146
1907–8	4,286	382	555	86	175	5,484
1908–9	3,813	1,063	540	24	325	5,765
1909–10	1,688	1,159	2,603	Nil	325	5,775
1910–11	1,066	685	1,643	11	325	3,730
1911–12	2,619	715	2,237	22	345	5,938
1912–13	12,997	798	2,697	6	345	16,843
Grand total						59,855

* Included in Board's expenses.

The Scenery Preservation Act, 1903, consolidated in the Act of 1908, provided a total sum of £100,000 for the purposes of the Act. Each year a certain portion of this amount is appropriated by Parliament and authorized for expenditure. It will therefore be seen that a balance of £40,145 remains available for future appropriations under the Scenery Preservation Act. As already stated, an area of 211,501 acres is reserved under the Act. These lands require periodical inspection, eradication of noxious weeds, fencing, and otherwise attending to, and the annual cost of maintenance and administration is a constant charge upon the vote.

REVOCATION OF RESERVATION.

On the north shore of Lake Rotorua the reservation has been removed from an area of 3,049 acres, chiefly covered with scrub, manuka, and forest. It was never intended that scenic reservations should cover areas of land suitable for farming and not of special value from a scenic point of view, and the removal of the reservation in question will largely help settlement in that part of the district. A small area around the beautiful Hamurana Springs has, however, been left intact.

PROTECTION OF RESERVES.

Every care has been taken to guard the scenic reserves throughout the Dominion from fire and destruction by cattle or trespassers. Each year adds to the value of the scenic reserves, as through the destruction of the native forests for the needs of settlement, and through accidental fires, &c., the typical bush is disappearing with great rapidity. Visitors who have travelled through the Dominion have expressed their appreciation of the foresight of the Government in preserving such beautiful specimens of nature, and it is hoped that before long the remaining portions of our unique scenery may be permanently secured to the people of New Zealand.

VALUE OF SCENIC RESERVATIONS.

One aspect of the operations under the Act must not be overlooked, and that is their great value from an economical point of view; the protection of the soil, the prevention of denudation on steep slopes and on the mountain-ranges, the conservation of the water-supply, and the good done to the country from a climatic point of view cannot be too much dwelt upon. The retention of most of the reserves is eminently desirable in order to maintain the water-supply in many districts in a satisfactory state, and as a large proportion of the reserves are situated on the banks of streams and rivers they act very materially in keeping open the channel and preventing its silting up through the deposit of soil from the surrounding country after a heavy rainfall. In some cases the *value* of a few hundred acres of native bush on the steep banks of rivers and streams may be set down at thousands of pounds, a typical instance being afforded at Taihape, where the steep banks of the Hautapu River and the

Otaihape Stream are clothed in forest, which not only protect the streams in question and the surrounding country, but will undoubtedly attract to the town an increasingly large proportion of visitors each year. In this case alone the two or three hundred acres of bush, so long as it is kept intact, may be valued at £100,000; but should it be destroyed and the land denuded of forest covering, the damage done to the streams and the surrounding country would be very great indeed. It is hoped, therefore, that local bodies and settlers throughout the Dominion may realize more and more how advisable it is to maintain scenic reserves in suitable positions as much in a state of nature as possible, and future generations will undoubtedly bless their efforts in this direction.

SCENERY PRESERVATION BOARD.

During the year the Scenery Preservation Board has held six meetings, all in Wellington, and has endeavoured to make recommendations on the matters submitted to it as far as possible in the joint interests of settlement and forest-preservation.

FENCING.

One of the questions that is becoming every day more pressing is the need of adequate fencing around many of the best scenic reserves, in order that, as the surrounding country becomes more and more settled, the stock of the settlers cannot inadvertently trespass upon and damage the reserves.

WEEDS.

The growth of noxious weeds has been kept down to a very satisfactory extent, and the Inspector of Scenic Reserves makes periodical visits to each district to ensure that the lands remain in a satisfactory condition.

NEW WATERFALL.

During November, 1912, Mr. J. P. Larkin, Assistant Surveyor in the Department, visited a very fine waterfall the existence of which had been previously known but which had not hitherto been reached. It is known as the Rerepahupahu Fall, and is situated in the Ohura County (Waro Survey District), on the Waitaanga Stream. Its height is estimated to be 280 ft., the aneroid height of the bottom of the fall being 925 ft., and the river at top 1,225 ft.; the tops of the wall or cliff surrounding the fall is 1,525 ft. At the bottom of the fall is a lake about 1½ acres in extent. The volume of water coming over the falls varies greatly according to the season of the year. At present the access to the fall is very difficult.

GENERAL.

In conclusion, it may be stated that officers of the Department, and Government officers generally, appear to take a keen and intelligent interest in the question of scenic preservation, and it is most satisfactory to relate that local bodies and settlers generally appear more and more disposed to co-operate with the Government so far as is practicable in this respect.

APPENDICES.

Attached to the report are the following appendices:—

(A.) Schedule of reserves made during the year, accompanied by statement of accounts.
(B.) (1.) Report of the Inspector of Scenic Reserves.
  (2.) Report of the Honorary Ranger, Pelorus Sound.
  (3.) Report of the Caretaker in Queen Charlotte Sound.
(C.) (1.) Report of the Scenery Preservation Board.
  (2.) Report of the Kennedy's Bush Scenic Board.
  (3.) Report of the Summit Road Scenic Board.

APPENDICES.

APPENDIX A.

Reserves made in 1912–13 under the Scenery Preservation Act, 1908, and the Amendment Act, 1910.

Recommendation No.	Local Name.	Description.	Area.			Date of Proclamation in *Gazette*.
			A.	R.	P.	
		Auckland Land District.				1912.
196	Manga-o-Kewa Gorge	Parts Pukenui 2U and Rangitoto Tuhua No. 64 Blocks, Otanake S.D.	514	1	18	25 April.
264	Mangamuka Gorge	Section 7, Block II, Mangamuka S.D.	70	0	0	25 ,,
269	Arorangi Scenic Reserve	Section 1, Block X, Awakino North S.D.	463	0	19	25 ,,
251	Ohiwarau Scenic Reserve	Part Sections 183, 189, Block XI, Whakatane S.D.	50	3	8	8 Aug.
265	..	Section 4, Block XI, Tokatoka S.D.	74	3	10	22 ..
267	Waikite Hot Spring (Ohinemutu)	Sections 6–10, Waikite, Block I, Tarawera	0	0	22·5	5 Sept.
180	Rangiriri Pa	Part Section 154, Township of Rangiriri	0	1	20	21 Nov.
						1913.
*	..	Section 1, Block XIV, Coromandel S.D.	114	2	6	20 Feb.
			1,288	0	23·5	
		Hawke's Bay Land District.				1913.
224	Te Reinga Falls	Parts Rimuroa and Mangapoike 2A No. 2 Blocks, Opoiti S.D.	38	3	0	16 May.
			38	3	0	
		Taranaki Land District.				1912.
291	Paritawai Scenic Reserve	Section 6, Block VI, Mahoe S.D.	5	0	9	12 Sept.
292	Mapara Scenic Reserve	Section 7, Block V, Totoro S.D.	15	0	0	12 ,,
293	Arahui Scenic Reserve	Section 6, Block X, Waro S.D.	16	3	0	12 ,,
			36	3	9	
		Wellington Land District.				1912.
271	Rangitatau Scenic Reserve	Section 10, Block I, Nukumaru S.D.	11	2	16	11 April.
		Section 15, Block I, Nukumaru S.D.	17	1	24	11 ..
		Section 4, Block V, Nukumaru S.D.	36	3	0	11 ..
		Section 5, Block V, Nukumaru S.D.	14	0	0	11 ..
		Section 6, Block V, Nukumaru S.D.	18	3	24	11 ..
		Section 9, Block V, Nukumaru S.D.	98	0	0	11 ..
38	Waimarino Scenic Reserve	Part Waimarino No. 4, Block IV, Manganui S.D.	128	1	02	25 ..
151	Upper Turakina Valley	Parts Sections 7 and 8, Block V, Tiriraukawa S.D.	17	1	35	25 July.
256	Ruapirau Scenic Reserve	Part Ohutu 3A, Block XI, Tauakira S.D.	102	1	21	29 Aug.
*	..	Section 166, Town of Makuri	10	1	13	5 Sept.
305	Waimarino Scenic Reserve	Sections 7, 8, Block XVI, Kaireke S.D.	130	1	10	21 Nov.
156	Wairarapa Lake	Sections 1, 2, Block IX, Wairarapa S.D.	67	2	23	21 ,,
303	Puawai Scenic Reserve	Section 26, Block VI, Hunua	25	3	35	5 Dec.
*	..	Section 2, Block X, Umutoi	106	2	33	5 ..
304	Pahiatua Hill	Closed road in Block XI, Mangahao	0	1	30	12 ,,
272	Turakina River bank	Part Section 13, Block XII, Mangawhero	1	0	28	12 ,,
						1913.
273	Kaitoke Scenic Reserve	Part State forest in Blocks III, Rimutaka S.D., and XV, Akatarawa S.D.	587	1	6	30 Jan.
			1,374	2	20	
		Nelson Land District.				1912.
*	Marble Hill	Section 6, Block III, Lewis S.D.	408	0	0	23 May.
*	Hope and Buller River banks	Reserve 1, Blocks II, III, VI, VII, IX, X, Hope S.D.	5,000	0	0	13 June.
	,, ,,	Reserve 2, Blocks VI, VII, IX, X, XI, Hope S.D.	4,200	0	0	13 ..
*	Lake Rotoroa	Reserve 3, Blocks II, VI, VII, X, XI, Rotoroa S.D.	5,100	0	0	13 ..

* Previous Land Act reservation.

APPENDIX A—*continued*.

Reserves made in 1912–13 under the Scenery Preservation Act, 1908, etc.—*continued*.

Recommendation No.	Local Name.	Description.	Area.			Date of Proclamation in *Gazette*.
			A.	R.	P.	
		Nelson Land District—continued.				1912.
*	Buller River banks	Reserve 4, Blocks XIV, XV, XVI, Lyell; Blocks I, II, Maruia S.D.	7,300	0	0	13 June.
	..	Reserve 5, Block XIII, Lyell; and Block I, Maruia S.D.	500	0	0	13 ,,
	..	Reserve 6, Blocks XIV, XV, Lyell; Blocks I, II, III, Maruia S.D.; and Block III, Inangahua S.D.	6,800	0	0	13 ,,
	..	Reserve 7, Blocks I, II, III, V, and VI, Inangahua S.D.	4,300	0	0	13 ,,
	..	Reserve 8, Blocks III, IV, VII, VIII, Ohika S.D.	3,600	0	0	13 ,,
	..	Reserve 9, Blocks III, IV, VII, VIII, Ohika S.D.	4,600	0	0	13 ,,
*	Lake Rotoiti	Reserve 11, Block XVI, Howard; Block XIII, Motupiko; Blocks IV, VIII, Arnaud; Blocks I, V, Rotoiti	1,900	0	0	13 ,,
	..	Reserve 12, Block XIII, Motupiko; Blocks I, V, Rotoiti S.D.	1,700	0	0	13 ,,
171	D'Urville Island	Part Section 20, Block XVII, D'Urville S.D.	192	0	0	19 Dec.
						1913.
171	..	Section 21, Block XI, D'Urville S.D.	53	0	0	20 Feb.
			45,653	0	0	
		Marlborough Land District.				1912.
88	Mahau	Section 6, Block II, Linkwater S.D.	131	0	0	16 May.
281	Whenua-nui Scenic Reserve	Section 13, Block XI, Linkwater S.D.	160	0	0	8 Aug.
	Kaipupu Scenic Reserve	Section 4, Block VIII, Linkwater S.D.	145	0	0	8 ,,
283	Ronga Scenic Reserve	Section 51, Block I, Wakamarina S.D.	42	0	0	8 ,,
	Rai River bank	Section 52, Block I, Wakamarina S.D.	12	0	0	8 ,,
282	Blumine Island	Section 1, Block XIV, Gore S.D.	113	0	0	8 ,,
92	Otoromiro Scenic Reserve	Sections 13, 14, Block XI, Orieri S.D.	39	0	0	17 Oct.
86	..	Sections 22, 23, 24, 29, Block IX, Wakamarina S.D.	372	2	0	17 ,,
284	Hundalee Scenic Reserve	Section 2 of Native Reserve K and Native Reserve J, Block XV, Hundalee S.D.	15	1	11	28 Nov.
			1,029	3	11	
		Westland Land District.				1913.
*	..	Section 638, Block XIII, Hohonu S.D.	1,347	0	0	6 Feb.
		Canterbury Land District.				1912.
210	Peel Forest	Sections 1414, 1415, Block II, Orari S.D.	40	0	0	2 May.
310	Coronation Hill	Reserve 3900, Block III, Halswell S.D.	8	1	31	28 Nov.
311	Hoon Hay Park	Reserve 3901, Block III, Halswell S.D.	41	1	13	28 ,,
			89	3	4	
		Otago Land District.				1912.
262	Roslyn Scenic Reserve	Part Sections 121, 122, Waikari; Allotments 39–43 and part 38, Township of Rutherglen (Borough of Roslyn)	9	3	33	22 Aug.
166	Leith Valley, Dunedin	Part Sections 1, 3, 11, 33, 34, Block VIII, North-east Harbour; part Section 74, Block XI, Blueskin S.D.; and Allotment 2, Block V, Township of Dalmore	18	1	2	22 ,,
252	Taieri River bank	Lots 29A, 29B, Block A, Taieri Native Reserve, Otokia S.D.	39	3	8	5 Sept.
274	Evansdale Glen	Section 96, Block I, Waikouaiti S.D.	12	3	0	19 ,,
						1913.
106	Waipori Falls Scenic Reserve	Sections 54, 55, Block XV, Maungatua; Section 7, Block X, Waipori S.D.	1,262	0	0	6 Feb.
			1,342	3	3	
		Southland Land District.				1912.
286	Ouruwera Scenic Reserve	Section 4, Block XII, Longwood S.D.	122	0	0	8 Aug.
*	Rakiahua Scenic Reserve, Stewart Island	Section 1, Block IV; Sections 1, 2, Block V; all Block VI; Section 1, Block VII; Mason S.D.	2,800	0	0	5 Sept.
232	Clifden Scenic Reserve	Lot 1, Section 1, Block I, Lilburn S.D.	17	0	30	12 ,,
			2,939	0	30	

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* Previous Land Act reservation.

Summary of Reserves.

Land District.	Number.	Area. A.	R.	P.
Auckland	8	1,288	0	23·5
Hawke's Bay	1	38	3	0
Taranaki	3	36	3	9
Wellington	12	1,374	2	20
Nelson	14	45,653	0	0
Marlborough	9	1,029	3	11
Westland	1	1,347	0	0
Canterbury	3	89	3	4
Otago	5	1,342	3	3
Southland	3	2,939	0	30
Totals, 1912–13	59	55,139	3	20·5
Reserved up to 31st March, 1912	262	159,808	2	35
	321	214,948	2	15·5
Less reservations revoked (as under)	3	3,386	0	38
Grand totals	318	211,562	1	17·5

REVOCATION OF RESERVATION.

Recommendation No.	Locality.	Description.	Area. A.	R.	P.	Date of *Gazette.*
						1912.
272	Turakina River bank	Part Section 5, Pukeroa Village, Block XII, Mangawhero	16	1	22	18 April.
	..	Part Section 9, Block IX, Hunua S.D.	6	0	0	23 May.
272	Turakina River bank	Part Section 7, Pukeroa Village, Block XII, Mangawhero	0	3	28	12 Dec.
66 & 67	Rotorua Lake, north shore	Section 8, Block XII, Rotorua S.D.; Block V, Rotoiti S.D.	3,049	0	27	21 Nov.
19	Pongaroa Scenic Reserve	Part Sections 1, Block XII, and 3, Block XIII, Pongaroa Town	0	0	25	12 Dec.
246	Islands in Hauraki Gulf	Motu Oruhe and four other islands	310	0	0	12 ,,
						1913.
*	..	Part Section 2, Block X, Umutoi S.D.	3	2	16	16 Jan.
			3.386	0	38	

* Land Act reservation.

STATEMENT OF ACCOUNTS SHOWING THE AMOUNTS EXPENDED, AND THE PURPOSES TO WHICH THE MONEY SO EXPENDED HAS BEEN APPLIED, FOR THE YEAR ENDED 31ST MARCH, 1913.

Reference to Appropriations.	Particulars.	Gross Expenditure.	Recoveries.	Net Expenditure.
Vote 122.		£ s. d.	£ s. d.	£ s. d.
Item 1	Salaries	345 0 0	..	345 0 0
,, 2	Administration of reserves and historic spots	825 5 4	..	825 5 4
,, 3	Compensation, &c., in connection with lands taken under the Scenery Preservation Act, 1908	742 16 9	..	742 16 9
,, 5	Compensation for Native lands taken for scenery purposes	10,015 4 7	471 1 9	9,544 2 10
,, 6	Expenses of Board	6 4 0	..	6 4 0
,, 7	For payment to Land for Settlements Account for capital value of reserves, Tripp Settlement	2,710 2 6	..	2,710 2 6
,, 9	Survey, valuations, and incidental expenses	2,706 18 5	9 6 0	2,697 12 5
				16,871 3 10
	Credits in reduction previous year's expenditure	..	28 4 9	
		£17,351 11 7	£508 12 6	£16,842 19 1

NOTE.—£11 14s. 3d. was received by way of rents for period under review.

Cost of Administration of Reserves and Historic Spots under the Scenery Preservation Act.

Particulars.	Amount.		
	£	s.	d.
Advertising reserves about to be taken for scenery purposes	50	10	9
Fencing reserves	493	1	3
Eradication of noxious weeds	150	0	0
Salaries and expenses of caretakers	131	13	4
	£825	5	4

Compensation, &c., in connection with Lands taken under the Scenery Preservation Act, 1908.

Name of Reserve taken.	Amount of Compensation paid.		
	£	s.	d.
Diamond Lake, head of Lake Wakatipu	57	2	6
Kaikorai Valley, Dunedin	265	10	3
Mangamuku Gorge	200	0	0
Maungakaretu, near Turangarere	79	0	0
Mangaotaki	121	4	0
Sections 7 and 8, Block V, Tiriraukawa	20	0	0
	£742	16	9

Compensation for Native Lands taken for Scenery Purposes.

Name of Reserve taken.	Amount of Compensation paid.		
	£	s.	d.
Atene (part only), Wanganui River	5	0	6
Kahura, Wanganui River	136	18	1
Mohunu, Wanganui River	34	19	4
Dannevirke (Tahoraite No. 2 Block)	717	10	0
Maungakaretu, near Turangarere	879	14	4
Ruakuri Caves	137	2	1
Waharangi (Pipiriki–Raetihi Road)	2,618	13	10
Paetawa, Wanganui River	32	9	1
Te Tuhi, Wanganui River	37	4	9
Rangiwaea (near Karioi)	199	0	0
Haumoana	148	2	2
Waitomo Bush, opposite caves	136	0	0
Hangatiki, between caves and station	223	6	2
Whakaihuwaka, Wanganui River	957	0	0
Te Reinga Falls, near Wairoa, Hawke's Bay	75	0	0
Whakapapa Gorge, North Island Main Trunk Railway	34	5	0
Tongoio Falls, near Napier	1	2	11
Mangaokewa Gorge, Te Kuiti	792	5	11
Mamaku, near Rotorua	1.949	2	10
Hongi's Track, Lake Rotoiti	150	19	2
Rotoma, at Lake Rotoma	40	0	2
Taieri River bank	68	6	6
Waikite Hot Springs, Ohinemutu	170	0	0
	£9,544	2	10

Cost of Surveys, &c., under the Scenery Preservation Act.

Reserves.	Amount.		
	£	s.	d.
Dannevirke	18	7	10
Mokau River bank	692	17	3
D'Urville Island	47	10	0
Maungakaretu	11	10	4
Wanganui River bank	596	0	4
Papaitonga Lake, Levin	4	8	4
Kawhia Harbour reserves	307	0	0
Kaikorai Valley, Dunedin	6	11	0
Ngapaeruru, near Dannevirke	18	7	10
Kaitoke, alongside railway	60	18	0
McLennan's River	87	3	8
Ohura	45	15	0
Table Hills	64	9	8
Clifton	8	7	6
Tainui	10	2	3
Travelling, legal, and incidental expenses	718	3	5
	£2,697	12	5

APPENDIX B.

Report by the Inspector of Scenic Reserves.

During April and the earlier part of May of the last year I was engaged in Southland in inspections of gazetted scenic reserves and proposed acquisitions of land for scenic purposes. In June I made a visit to the Motu district to inspect the forest that the Department had been urged to buy for scenic purposes along the Gisborne–Opotiki Railway. In August I inspected the forests in the vicinity of the lakes near Rotorua, and made proposals for the acquisition of the Native lands along the lake-shores, and the opening-up of some of the Crown forest reserves to pay for the former. In December I was principally engaged in the inspection of assisted plantations that had been done on sand-dunes on the west coast of the Auckland Province. I also inspected other dunes at Waiuku, Kawhia, Levin, and Rangitikei. I had to make several visits to the Mokau River and Wanganui River in connection with lands that were being surveyed for scenery-preservation by Messrs. Larkin, Sladden, Bogle, Wall, and Richmond. All the surveys of lands proposed to be acquired on the Mokau are now completed, but there are some sixteen miles more of the frontage of Native lands on the Wanganui to be surveyed. I inspected and reported on the State forest reserves at Rangiwahia, Ohau, and Wainui, besides in the intervals inspecting numerous other smaller reserves and proposed reserves and forests in both the North and South Islands. In February I was appointed Secretary to the Royal Forestry Commission, and since then have been entirely engaged with the duties of that position.

Condition of Reserves.—As pointed out above, during the past year I have been almost entirely occupied with inspections of new country, but those established reserves that I did inspect were, with one or two exceptions, in very good condition.

Noxious Weeds.—In some districts where noxious weeds are prevalent they have spread on to our reserves, and though the adjoining settlers may have their own lands badly infested with weeds they are very impatient when weeds are seen on the Crown reserves. For this reason, and also for the reason that negligence to regularly attend to weeds generally leads to their getting entirely beyond control, it is most necessary that they should be regularly cut down.

Damage by Stock.—All people who make any study of forest-preservation are unanimous in the opinion that it is absolutely essential to exclude all herbivorous animals from the forests. Not only are there many plants that they soon eat out, but by breaking down the undergrowth and opening up tracks they let in light (which enables noxious weeds to get established) and wind (which, by its drying effect, increases the risk of fire). Stock also carry about seeds of noxious weeds in their dung or in their hoofs. Furthermore, if the seedlings in our native forests are going to be eaten by trespassing stock, what will there be to replace the big trees that in most cases are on the decline? The above opinions I have expressed in previous reports, but they are of such importance that their reiteration must be a part of any essay on forest-preservation.

Fires.—As far as my inspections went I did not see evidence of much additional damage to the reserves by fires. Any observant person who travels much through New Zealand cannot fail to notice how recklessly people burn off the natural covering of the land in places where it should never be interfered with. In the mountains of the South Island one sees steep slopes, formerly carrying a dense growth of tussock, fast being converted through the agency of fire into shifting shingle-slopes. In the North Island one sees the sides of deep gorges and steep hillsides (once carrying a vigorous crop of tutu, manuka, or fern, which used to retard the "run-off" of the water) being recklessly burnt off, and rapid denudation taking place. Is it not time that we should adopt some severe measures to stop this blind and stupid destruction? In the United States and Canada quite numerous staffs of fire-wardens are kept, and their wages are said to have been paid many times over by the property they have saved from fire. In his last annual report the Director of Dominion Parks, Canada, states that since the railway companies have been forced to use spark-arresters on the trains there has been a very marked diminution in the number of prairie and forest fires.

Native Birds.—All that I have to report with regard to our native birds is that I liberated on Kapiti Island sanctuary three night-parrots (kakapo) and five kiwis from the South Island. The birds were in good heart when let go, and should succeed on the island. It is hoped later on to put on this island some more specimens of our rarer birds.

Botanical.—I had little opportunity of botanical work this year, so all I have to record is the discovery of some plants in new habitats. *Teucridium parvifolium*, *Microlœna polynodum* (a bamboo-like grass), and *Veronica parviflora* were found in Whisker's Bush at Feilding. The diminutive plant *Drosera pygmæa* I found at Waiouru. As this plant had previously been found only at the northern and southern ends of the Dominion, its discovery in the middle is of considerable interest. *Olearia furfuracea* (a daisy-tree) was found near Pipiriki, and *Paratrophis heterophylla* (a rubber-producing tree) at the Hokonui Hills.

General Observations.—I have now inspected most of the reserves in the Dominion, and, speaking generally, I can say they are in very good condition.

In one of my previous reports I advised that at railway-stations, river-landings, and wharves notices should be erected warning people of the penalty they incurred if they made fires in scenic or forest reserves.

Some of the reserves that have been made on the highest slopes of ranges are valuable more particularly as climatic reserves; they are generally of large area, and in consequence are often looked upon with disfavour by the pioneer settler, as he has seldom an appreciation of their purpose. Were these reserves also called *climatic* reserves he would understand they had a definite and very important utilitarian object, and would in consequence be quite reconciled to their existence.

As the lands in the vicinity of the lakes in the Rotorua district are being fast taken up by European settlers, it seems important that the forests fringing the shores of these important lakes should be acquired for preservation. As there is a large area of forest reserve in the district which is serving no useful purpose, it would be advisable to throw open the reserve for settlement, and with the moneys thus obtained purchase the forested margins of the lakes. This could be done without monetary loss.

Another matter of importance is the extension of the boundaries of the Tongariro National Park in accordance with the rough scheme proposed in the joint report of Dr. Cockayne, F.R.S., and myself. It is probable that if this park were made more conveniently accessible to tourists it would prove one of the greatest attractions in the Dominion. There are in the accessible parts of the world few active volcanoes that can be inspected with such ease and safety as Ngauruhoe.

I am afraid that in the North Island, where native bush is still plentiful, scenic reserves are looked upon by the country residents with disfavour; but the bush on private and Native lands is every year rapidly diminishing; and I think it may safely be concluded that in quite a few years the children of the present objectors will be strong appreciators of the beneficent foresight of those who conserved for their use and enjoyment specimens of forests which are beautiful and unique. Then they will grudge the comparatively few acres that these reserves occupy no more than the average city man grudges the areas that are taken up by the city parks and gardens.

E. Phillips Turner,
Inspector of Scenic Reserves.

Report of the Honorary Ranger for Pelorus Sound.

Having just returned from five days' tour, on foot, of scenic reserves, I am glad to say that since my report three months ago regarding fires adjacent to Mrs. Campbell's place near Tuna Bay, Tennyson Inlet, no further injury has been done there; and, as regards all the scenic reserves throughout the various branches of the Pelorus, extremely little injury through fire during this very dry summer has been done. I am also glad to find that there now generally is a growing conviction amongst the Pelorus Sounds settlers that the scenic reserves are in reality adding to the value of their holdings, and there is evidence that greater care than formerly is now being taken to prevent fires from getting into them. I may also say that nearly the whole of the Sounds County settlers are now in favour of the preservation of the Upper Tennyson Inlet as a national reserve; and, considering its value as such compared with its small value for any productive purposes, I would beg to urge that the whole of the unalienated hills and bush left on this inlet should be at once permanently reserved. Tennyson Inlet, I may add, is one of the scenic assets of New Zealand, and from its value as a flora and fauna reserve, as well as its accessibility and the delightful interests that are attached to it, it is worthy of the nation's care.

I may also state that during my recent tour I have very respectfully urged upon a number of people the need of care as regards fires damaging what is left of bush on the one-chain reserves along margin of sea-shore of the Sounds, and, to some extent, I am being rewarded by promises from settlers as regards this. It sometimes happens that the freehold runs right down to the water, and in these cases one can only hope that the good taste and love of the beautiful in the freeholder will overcome the utilitarian side of his nature, and the beautiful fringe of native bush be preserved from destruction.

F. Ward,
Honorary Ranger.

Report on Scenic Reserves, Queen Charlotte Sound.

During the year just closed matters in connection with the above-named reserves have remained much as in former years, and with the exception of the erection of a substantial monument to the memory of Captain Cook, at Ship Cove, and the building of sanitary conveniences and a fireplace at Kumutoto Bay, development has remained at a standstill.

Visitors frequently complain of the density of the bush and the difficulty of getting about to the numerous beauty-spots, and suggest that rough bush-tracks be opened out on the principal reserves. Campers during the season just passed have been exceptionally few, though visitors have kept well up to the average; both these sections of the community, on the whole, show a great admiration for and a keen desire to protect the reserves, though a few unprincipled vandals appear to take a delight in committing all the damage they can safely do. I am convinced that should the existing supervision be removed the damage done would be much greater than at present.

Two additional reserves have been added to the number in Queen Charlotte Sound—viz., Kaipupu, within two miles of Picton, and Whenua-nui, about four miles; both contain many beauty-spots, and through their proximity to town should prove a great attraction to visitors. Owing to the abnormally dry season, bush-fires were very prevalent, but I am pleased to be able to report that all the reserves escaped this scourge, with the exception of the Kumutoto, a bush-fire from Blackwood Bay spreading into this and destroying about 5 acres of bush.

Kumutoto Reserve.—This reserve now takes premier place as a resort for campers and visitors, large numbers visiting it in the course of the season. During the year sanitary conveniences and a substantial brick fireplace were erected, and gave great satisfaction to all visitors. Bathing is a great attraction here, and I would suggest that a dressing-shed for ladies be built at an early date; it need not be either an expensive or elaborate affair, and would be a great comfort to the bathers.

On the 15th February a fire spread from a holding in Blackwood Bay over the ridge into this reserve, destroying about 5 acres of bush on the hill-top. The matter was duly reported to the Department to be dealt with.

Ship Cove.—During the past year a handsome and substantial monument to the memory of Captain Cook was erected here. The unveiling ceremony took place on the 11th February, and was a great and brilliant success, an estimated gathering of some two thousand visitors being present.

On the 10th June and 14th September, 1912, wild-pig hunts were carried out with the assistance of adjoining settlers, the idea being to drive out the pigs breeding there, and so relieve the settlers of the depredations caused by them. On both occasions the weather was unfavourable, the results being practically nil; since when no complaints have been made in regard to the wild pigs.

Bushfelling.—In only one instance was bush felled in conjunction with a reserve. This was in connection with Edgecombe Point. The work of firing the bush was successfully carried out on the 4th February, hardly a tree on the reserve being scorched.

All the reserves are more or less run through by sheep and cattle.

It is with much pleasure I can report that the native pigeon this season is fairly numerous on all the reserves, being particularly so at Ship Cove.

HARVEY TURNER,
Caretaker.

APPENDIX C.

REPORT OF THE SCENERY PRESERVATION BOARD.

DURING the twelve months ended the 31st March, 1913, the following meetings of the Board were held: At Wellington, on the 7th May, 1912, to deal with Marlborough lands; at Wellington, on the 26th June, 1912, to deal with Southland lands; at Wellington, on the 22nd July, 1912, to deal with Taranaki lands; at Wellington, on the 23rd August, 1912, to deal with Auckland lands; at Wellington, on the 12th September, 1912, to deal with Wellington lands; at Wellington, on the 26th September, 1912, to deal with Canterbury lands.

The Board submitted thirty-one recommendations to His Excellency the Governor, and a large number have already been given effect to, while the remainder are under consideration. In all cases the Board has exercised the greatest care and discrimination in not recommending for reservation areas of land suitable for close settlement, and has endeavoured to confine its recommendations to country of a picturesque appearance but almost entirely unfitted for settlement.

The preservation of most of the land recommended for scenic reservation in a state of nature will undoubtedly be to the benefit of the surrounding country, as it will tend to the check or prevention of floods in the locality, and preserve the soil on the numerous high ridges, ranges, and deep gullies which form such a large portion of the reserves. Only where land is situated close to large centres of population and the residents strongly desire its reservation for the benefit of the town, or where the bush is of exceptional beauty, is flat land or farming-land ever recommended, and then only in small areas. The interests of settlement are in every case rigidly respected and safeguarded, and most careful and detailed inspections are made of every area before its reservation is recommended.

I took the opportunity, when carrying out departmental inspections, to visit and inspect scenic areas adjacent to my route of travel.

JAMES MACKENZIE,
Chairman, Scenery Preservation Board.

KENNEDY'S BUSH SCENIC BOARD.

The only work done during the year has been the cleaning of the springs in the reserve, strengthening of fencing, and clearing of the planted enclosure from the mat of grass, twitch, and weeds that was checking the growth of the tea-trees, koromiko, &c. Since the area has been fenced in and cattle excluded the bush is recovering vigorously.

The cocksfoot last season was harvested by the roadmen who had been working on the new track to Cooper's Knob, at 2½d. a pound, which resulted in a profit to the Board of £5 8s. 5d.

Receipts and Expenditure for the Year ending 31st March, 1913.

Receipts.	£	s.	d.	*Expenditure.*	£	s.	d.
Balance from last year	0	10	7	A. Small, grass-seed	28	10	0
Grass-seed, 1912..	52	13	2	Wages and expenses	20	9	6
Lithos, Summit Road	6	16	6	Balance in hand	16	8	8
Grass-seed, 1913..	5	8	5				
	£65	8	2		£65	8	2

C. R. POLLEN,
Chairman.

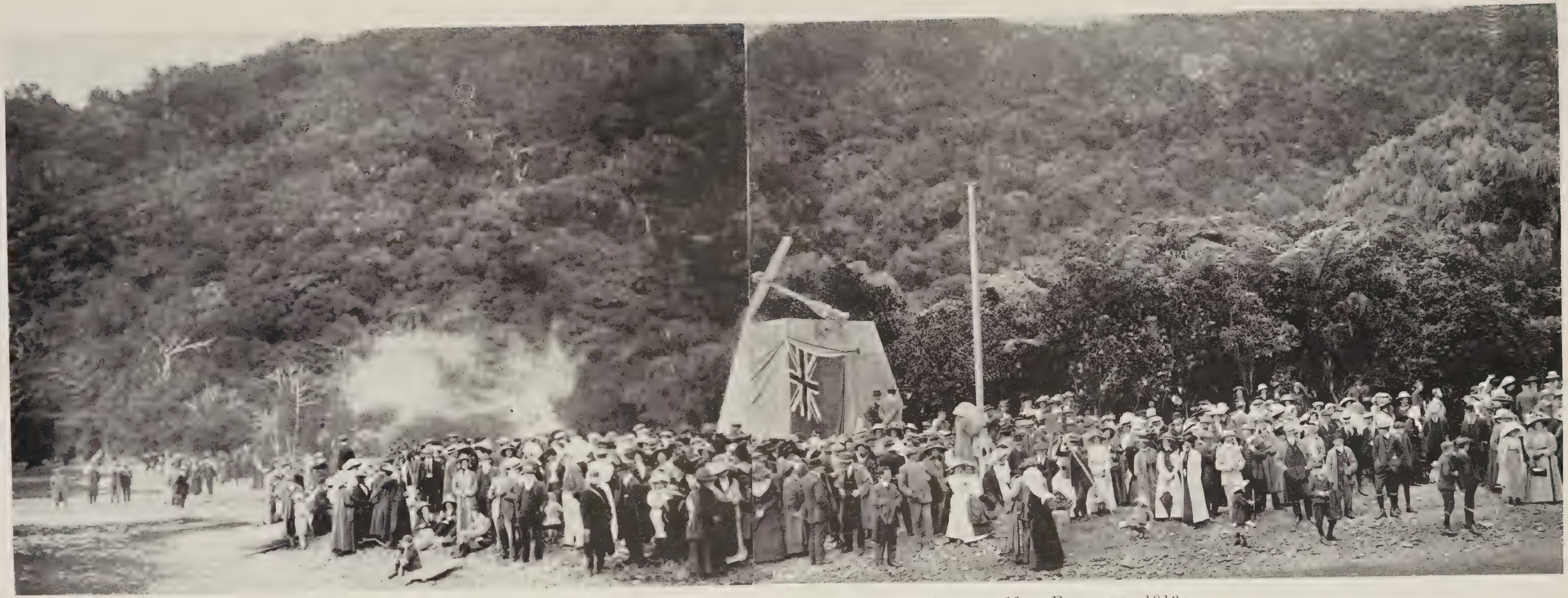
SUMMIT ROAD SCENIC BOARD.

No work has been carried out during the year on the reserves under the control of the Board, but arrangements have been made for the fencing of the Hoon Hay Park Reserve. When fenced, a revenue will be derivable, which will be be devoted to planting and other desirable improvements of parts of the reserves. These works will be definitely decided upon when it is known what amount of revenue will be obtained.

C. R. POLLEN,
Chairman.

Approximate Cost of Paper.—Preparation, not given; printing (1,500 copies), £9.

By Authority: JOHN MACKAY, Government Printer, Wellington.—1913.
Price 6d.]



Unveiling of Captain Cook Monument, Ship Cove, Marlborough Sounds, 11th February, 1913.

B. C. Aston, photo.]

WAIHI WATERFALL, NEAR WEBER.

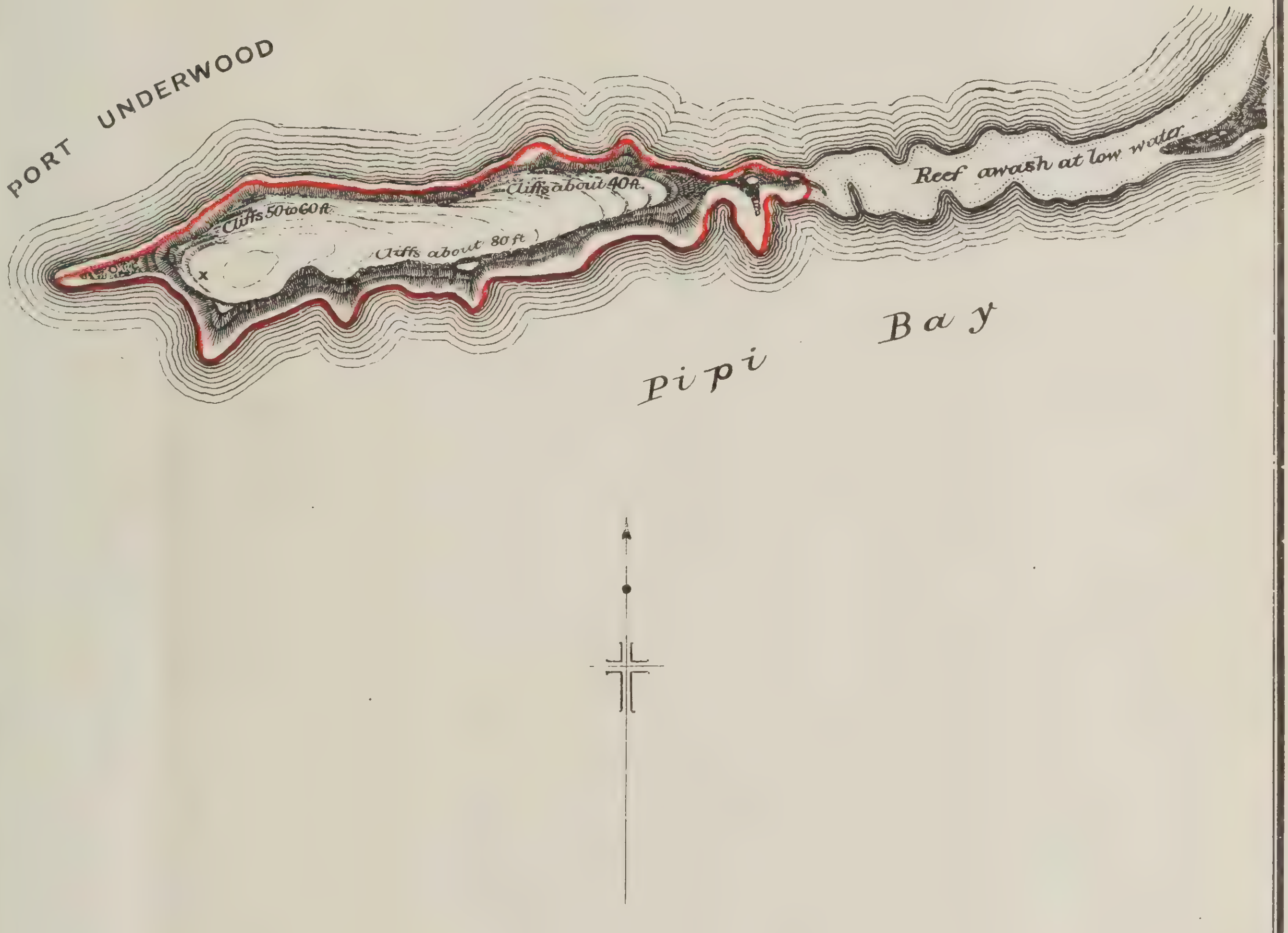
Rerepahupahu Waterfall, near Ohura, Taranaki.

Rerepahupahu Waterfall, near Ohura, Taranaki.

Plan of Horahora-kakahu Pa
(Horikaka)
Port Underwood Block XVI,
Arapawa S. D.

Scale of Chains

By W.H. Skinner.



Position of Maori Look-out, commanding view to all approaches to Pa and to Port Underwood from the north and south, marked thus, X.

It was at this Island Pa that the Proclamation of the British Sovereignty over the Middle (now South) Island of New Zealand was made, on the 17th June, 1840, by Major Bunbury, 80th Regiment, and Captain Nais, of H.M.S. "Herald," vide Major Bunbury's report to Governor Hobson: "The Marines were landed, and the Union Jack hoisted on the Horikaka Pa under a salute of 21 guns. The yards were also manned, and three cheers were given, &c."

E.P. delt. 1912.

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1913.

NEW ZEALAND.

THE NEW ZEALAND STATE-GUARANTEED ADVANCES ACT, 1909, AND AMENDMENTS

(DETAILS RELATIVE TO BLOCKS OF LAND PROCLAIMED UNDER).

Prepared and laid before both Houses of Parliament in accordance with Section 82 of the New Zealand State-guaranteed Advances Act, 1909.

STATEMENT showing the BLOCKS OF LAND which have been proclaimed under the New Zealand State-guaranteed Advances Act, 1909, and Amendments, and the Report of the Surveyor-General on the Value of such Blocks, and on the Necessary Works, and the Estimated Cost of the Works, and on the Moneys expended in respect of such Blocks out of Moneys borrowed under the said Acts.

Name of Block	Area of Block.	Gazetted.			Surveyor-General's Report.			Expenditure.		
		No.	Page.	Date.	Valuation of Block.	Works required to open up such Block.	Estimated Cost proposed to be borrowed.	To Mar. 31, 1912. *	From April 1, 1912, to March 31, 1913.	Total to March 31, 1913.
				AUCKLAND LAND DISTRICT.						
	Acres.				£		£	£	£ s. d.	£ s. d.
Ahuroa	5,049	23	479	18 Mar., 1892	2,184	Road-works	500	497	..	497 2 5
Akaaka Swamp	2,935	72	1273	15 Sept., 1892	2,093	Drainage ..	920	917	..	916 12 1
Auckland Special Settlement	8,995	78	1665	24 Oct., 1895	3,698	Road-works	899	898	..	898 0 1
Avoca	3,668	24	482	29 Mar., 1894	1,834	"	458	458	..	458 0 0
Awakino	1,210	97	2995	22 Nov., 1906	985	"	482	481	..	480 10 2
Awaroa No. 2	3,767	20	495	24 Mar., 1898	2,185	"	400	400	..	400 0 0
Harihari	729	81	3000	12 Oct., 1911	985	"	365	..	321 3 11	321 3 11
Hauturu	63,186	1 31	1 750	5 Jan., 1899 28 Mar., 1901	29,585	"	10,469	10,278	..	10,278 1 8
Huehue	4,134	59	1620	23 July, 1903	2,911	"	827	827	..	827 0 0
Huihuitaba	477	57	2181	13 July, 1911	285	"	130	3	126 16 0	130 0 0
Kaikokopu	7,397	16	435	23 Feb., 1899	2,774	"	739	739	..	738 18 2
Kaimango	600	19	837	12 Mar., 1908	600	"	210	197	5 8 0	202 16 0
Kaimarama	3,179	71	1372	21 Sept., 1893	1,431	"	447	447	..	447 0 0
Kaituna	3,995	61	2304	27 July, 1911	3,680	"	1,800	10	150 3 9	159 13 9
Kakepuku	2,732	33	1099	21 April, 1904	3,074	Roads and drains	683	683	..	682 19 10
Karioi-Alexandra	12,912	10	269 270	13 Feb., 1896	4,837	Road-works	1,662	1,662	..	1,661 14 6
Karioi Parish	550	20	495	24 Mar., 1898	206	"	55	55	..	55 0 0
Kauaeranga	3,556	91	2021	20 Dec., 1898	1,770	"	445	445	..	444 18 3
Kawaka	3,420	34	1152	28 April, 1904	1,332	"	684	684	..	683 17 3
Kawaroa	281	79	3225	25 Aug., 1910	340	"	160	16	144 4 10	159 18 10
Kawhia	4,927	70	1498	22 Sept., 1898	2,819	"	616	616	..	615 18 1
Kenana	773	50	1755	22 June, 1906	425	"	155	152	..	152 10 2
Ketetangariki	1,070	16	529	23 Feb., 1905	663	"	268	268	..	268 0 0
[illegible]nohaku West	60,311	100	2198	1 Dec., 1899	51,306	"	14,990	14,990	..	14,990 0 0
[illegible]nohaku West No. 2 ..	23,004	72	1572	1 Aug., 1901	7,589	"	5,753	5,753	..	5,753 2 6
Kiokio	4,349	66	1726	21 Aug., 1902	3,812	"	545	545	..	545 0 0
Kohumaru	3,993	83	1846	17 Nov., 1898	3,299	"	1,430	1,429	..	1,429 7 7
Kopua	4,263	73	2109	1 Sept., 1904	2,264	"	894	894	..	894 0 0
Korakonui	2,781	92	2804	4 Nov., 1909	3,343	Roads and bridges	543	402	162 18 10	564 19 0
Koutu	1,056	106	4166	8 Dec., 1910	1,029	Road-works	365	365	..	364 19 2
Kowaunui	3,464	63	2034	26 July, 1906	1,595	"	520	520	..	519 18 1
Mahoenui	6,471	73	1602	8 Aug., 1901	5,366	"	990	990	..	989 19 5
Carried forward ..	249,234	..	..	..	150,299	..	49,404	46,621	910 15 4	47,531 0 11

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* The figures give the totals to the nearest pound for the year ending 31st March, 1912.

STATEMENT SHOWING THE BLOCKS OF LAND WHICH HAVE BEEN PROCLAIMED UNDER THE NEW ZEALAND STATE-GUARANTEED ADVANCES ACT, 1909, AND AMENDMENTS, ETC.—*continued.*

Name of Block.	Area of Block.	Gazetted.			Surveyor-General's Report.			Expenditure.		
		No.	Page.	Date.	Valuation of Block.	Works required to open up such Block.	Estimated Cost proposed to be borrowed.	To Mar. 31, 1912. *	From April 1, 1912, to March 31, 1913.	Total to March 31, 1913.
				AUCKLAND LAND DISTRICT—*continued.*						
	Acres.				£		£	£	£ s. d.	£ s. d
Brought forward ..	249,234	..	..	..	150,299	..	49,404	46,621	910 15 4	47,531 0 11
Maioro Swamp	722	80	1365	13 Oct., 1892	476	Drainage ..	225	225	..	225 0 0
Maire	2,659	81	2343	6 Oct., 1904	931	Road-works	399	397	..	397 6 0
Mamaku	7,684	24	564	7 April, 1898	3,842	„	700	700	..	700 0 0
Manawahe	43,248	83	2221	14 Sept., 1905	25,909	„	6,190	4,405	1,785 6 5	6,190 0 0
Mangakahia	10,190	20	495	24 Mar., 1898	4,548	„	2,000	2,000	..	1,999 19 2
Mangakahia No. 2	1,109	91	2032	2 Nov., 1899	671	„	111	111	..	111 0 0
Mangamahoe	344	56	1447	15 June, 1905	356	„	112	102	10 2 0	112 0 0
Manganuiowae	4,599	23 77	479 2113	18 Mar., 1892 1 Oct., 1903	1,745		500	500	..	500 0 0
Mangaokahu	3,525	54 22	1047 629	6 July, 1893 13 Mar., 1902	1,743	„	424	396	7 4 5	403 0 3
Mangapu	1,203	11	558	13 Feb., 1908	1,733	„	601	601	..	601 0 0
Mangawhara	9,669	73	2109	1 Sept., 1904	6,073	„	2,416	2,416	..	2,415 19 5
Mangorewa-Kaharoa ..	23,987	91	2032	2 Nov., 1899	9,997	„	3,552	3,192	359 14 4	3,551 13 6
Mareikura No. 1	950	77	1716	27 Oct., 1898	493	„	120	120	..	120 0 0
Mareikura No. 2	584	79	1773	3 Nov., 1898	292	„	70	70	..	70 0 0
Mareretu	5,060	23	479	18 Mar., 1892	1,976	„	395	395	..	395 0 0
Marlborough	4,670	46	939	21 June, 1894	2,043	„	467	467	..	467 0 0
Maropiu	5,343	24	667	11 Mar., 1897	2,712	„	656	653	..	653 9 10
Maukoro	9,978	54	1517	2 July, 1903	5,729	„	1,496	1,496	..	1,495 19 7
Maungaru	4,368	20	494	24 Mar., 1898	2,184	„	460	460	..	460 0 0
Maungataniwha	4,000	23	479	18 Mar., 1892	1,500	„	500	499	..	499 1 6
Maungataniwha No. 2 ..	1,220	47	955	18 June, 1896	487	„	120	120	..	119 19 9
Maungataniwha No. 3 ..	470	84	2270	21 Sept., 1905	235	„	94	93	..	93 7 2
Moeatoa	2,930	68	1959	18 Aug., 1904	2,322	„	733	733	..	733 0 0
Motatau	5,803	23 24	479 885	18 Mar., 1892 2 April, 1903	2,349	„	600	599	..	598 10 7
Ngarua	3,461	97	2879	8 Dec., 1904	2,153	„	849	849	..	848 19 11
Ngunguru	6,216	46 16	973 529	20 June, 1895 23 Feb., 1905	3,417	„	772	772	..	772 0 0
Ngunguru Extension No. 2 ..	913	7	272	27 Jan., 1910	860	„	250	250	..	250 0 0
Ngutunui	1,657	54	1518	2 July, 1903	1,053	„	210	210	..	210 0 0
Oamaru No. 1	15,027	17	648	1 Mar., 1906	9,821	„	3,734	3,734	..	3,734 0 0
Oamaru No. 2	3,243	49	1735	6 June, 1907	2,587	„	1,293	1,291	..	1,290 19 3
Oamaru No. 3	17,000	70	2402	10 Sept., 1908	9,130	„	4,395	2,730	1,630 17 8	4,360 14 10
Oamaru No. 4	7,028	92	3714	20 Oct., 1910	4,744	Roads and bridges	2,285	1,908	377 0 2	2,284 19 8
Okohiriki	13,277	91	2021	20 Dec., 1898	5,094	Road-works	1,550	1,547	..	1,547 8 1
Okohiriki No. 1E	2,626	70	1858	4 Sept., 1902	1,050	„	260	259	..	259 2 3
Omanawa	3,380	90	2694	10 Nov., 1904	2,047	„	845	844	..	844 0 0
Omawhake	5,094	75	2154	8 Sept., 1904	2,135	„	637	635	2 0 0	636 19 6
Opanake	2,476	24	563	7 April, 1898	2,355	„	840	839	..	838 13 10
Oparau	1,075	84	3142	26 Oct., 1911	1,730	„	720	14	703 14 8	717 14 8
Opouteke	12,240	1 25	29 923	8 Jan., 1903 5 April, 1906	7,991	„	3,248	3,214	14 5 3	3,227 17 1
Opuatea No. 1	5,720	9	254	2 Feb., 1899	2,288	„	858	858	..	858 0 0
Opuatea No. 2	8,030	83	1847	17 Nov., 1898	2,735	„	1,000	1,000	..	1,000 0 0
Opuatea No 3	4,337	83	1846	17 Nov., 1898	1,976	„	600	600	..	600 0 0
Opuawhanga No. 1	4,815	23 77	412 2114	30 Mar., 1893 1 Oct., 1903	1,917	„	500	500	..	500 0 0
Opuawhanga-Whangarei No. 1	5,140	34 16	571 528	1 May, 1893 23 Feb., 1905	2,300	„	500	500	..	500 0 0
Orekopa	2,323	61	2304	27 July, 1911	4,450	„	2,200	..	276 4 11	276 4 11
Oruaiti	611	6	254	26 Jan., 1911	315	„	145	129	15 4 0	144 11 0
Otaenga	1,630	81	2343	6 Oct., 1904	1,019	„	326	..	..	..
Otakairangi	1,254	52	1643	24 June, 1909	875	Roads and drains	385	385	..	384 15 8
Otanake Special Settlement ..	7,253	62	1727	6 Aug., 1903	5,440	Road-works	1,813	1,800	..	1,799 11 9
Otau	18,510	71	1255	8 Sept., 1892	6,941	„	2,350	2,350	..	2,350 0 0
Otawa No. 2	3,802	105	3253	16 Dec., 1909	4,196	Roads and bridges	1,215	1,216	..	1,216 4 2
Otepo	463	16	528	23 Feb., 1905	232	Road-works	115	115	..	115 0 0
Otukai	8,946	83 70	1845 1856	17 Nov., 1898 4 Sept., 1902	5,014	„	1,059	1,059	..	1,058 19 8
Oue	6,248	78	2609	15 Oct., 1908	3,820	„	1,685	1,322	351 4 6	1,673 12 7
Oumauku	9,770	77	2114	1 Oct., 1903	2,931	„	1,465	1,463	..	1,463 6
Ouruwhero	2,615	49	1433	25 June, 1903	2,347	„	680	680	..	679 15
Owai	3,378	73	1602	8 Aug., 1901	1,008	„	340	340	..	340 0
Paekotare	752	20	494	24 Mar., 1898	296	„	80	76	..	75 14 6
Pakanae	992	73	1601	8 Aug., 1901	291	„	124	124	..	123 19 2
Pakeho	9,613	91	2032	2 Nov., 1899	5,720	„	1,800	1,800	..	1,799 18 9
Pakiri	4,125	85	2335	5 Nov., 1903	1,607	„	369	369	..	369 0 0
Carried forward ..	608,589	..	..	..	344,630	..	113,842	103,153	6,443 13 8	109,595 10 6

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* The figures give the totals to the nearest pound for the year ending 31st March, 1912

Statement showing the Blocks of Land which have been proclaimed under the New Zealand State-guaranteed Advances Act, 1909, and Amendments, Etc.—*continued.*

Name of Block	Area of Block.	Gazetted.			Surveyor-General's Report.			Expenditure.		
		No.	Page.	Date.	Valuation of Block.	Works required to open up such Block.	Estimated Cost proposed to be borrowed.	To Mar. 31, 1912. *	From April 1, 1912, to March 31, 1913.	Total to March 31, 1913.
Auckland Land District—*continued.*										
	Acres.				£		£	£	£ s. d.	£ s. d.
Brought forward ..	608,589	..	..	..	344,630	..	113,842	103,153	6,443 13 8	109,595 10 6
Papakauri	2,025	81	2658	22 Oct., 1908	2,119	Roads and bridges	506	444	48 19 0	492 12 1
Papamoa No. 2	1,443	7	273	1 Feb., 1906	719	Road-works	180	177	..	177 5 1
Parahaki	1,933	73	1601	8 Aug., 1901	568	"	193	11	..	10 15 0
Paremoremo	7,170	72	2693	12 Sept., 1912	9,400	"	2,000	..	..	..
Pareokawa	7,645	96	2148	7 Nov., 1901	3,557	"	950	946	..	946 3 7
Pirongia West	16,960	14	361	15 Feb., 1900	10,874	"	2,121	2,118	..	2,118 0 9
Pukemiro	1,111	68	1959	18 Aug, 1904	450	"	167	146	20 19 7	166 19 7
Pukenui	1,600	77	2113	1 Oct., 1903	1,200	"	240	240	..	239 19 4
Puketarata	5,347	1	1	4 Jan., 1900	2,177	"	535	533	..	532 11 7
Puketarata No. 2	3,027	104	2261	14 Dec., 1899	1,487	"	378	378	..	377 19 4
Puketarata No. 3	2,370	65	1702	14 Aug., 1902	2,371	"	296	296	..	295 19 4
Puketiti	603	17	680	1 Mar., 1906	737	"	151	151	..	151 0 0
Pupuke	2,373	81	3001	12 Oct., 1911	3,800	Roads and bridges	925	131	793 5 2	924 2 7
Puriri	1,856	91	2022	20 Dec., 1898	791	Road-works	186	185	..	185 6 0
Raetea	686	5	152	21 Jan., 1904	349	"	137	136	..	136 5 1
Ranga	1,394	44	1493	4 June, 1909	728	"	342	342	..	342 0 0
Rangitane	201	32	1334	20 April, 1911	125	"	50	50	..	50 0 0
Rangitoto	10,160	92	2804	4 Nov., 1909	16,720	"	3,800	3,798	..	3,798 2 1
Rotokakahi	4,022	99	2638	16 Nov., 1905	3,571	"	1,207	1,184	20 6 0	1,204 11 3
Roto Ngaro	14,841	112	2949	21 Dec., 1905	4,655	"	2,225	386	854 3 1	1,240 1 11
Rotongata	10,591	36	1446	4 May, 1911	7,125	"	2,550	451	968 1 0	1,419 9 5
Ruaoterei	570	78	2609	15 Oct., 1908	428	"	142	135	..	134 15 11
Ruapekapeka	10,355	77	1345	6 Oct., 1892	3,982	"	500	495	..	494 13 4
Taeore	340	55	1428	8 June, 1905	136	"	68	68	..	67 19 5
Tahora No. 2 North	62,699	24	522	28 Feb., 1901	15,052	"	5,190	4,903	273 6 0	5,176 0 9
Takahue	1,993	23	479	18 Mar., 1892	946	"	300	300	..	300 0 0
Takahue and Whangape ..	12,200	89	1864	5 Dec., 1895	4,270	"	1,800	1,800	..	1,800 0 0
Tangihua	4,660	104	2261	14 Dec., 1899	2,106	"	466	466	..	466 0 0
Tangowahine	5,162	69	2534	22 Aug., 1912	8,800	Roads and bridges	2,900	..	..	..
Tarawhati	8,060	76	2349	16 Sept., 1909	4,921	Road-works	2,364	2,364	..	2,364 0 8
Tauhara	7,378	71	2704	7 Sept., 1911	2,045	"	585	..	53 7 0	53 7 0
Tauhoa	4,069	15	336	18 Feb., 1892	1,675	"	449	449	..	449 0 0
Tauhoa-Komokoriki	2,585	35	573	4 May, 1893	949	"	325	325	..	325 0 0
Taumata	3,423	20	495	24 Mar., 1898	2,188	"	428	428	..	428 0 0
Taumata-Whakauma ..	3,269	62	1727	6 Aug., 1903	2,100	"	817	815	..	815 6 2
Taupiri	7,442	45	860	8 June, 1893	3,755	"	920	920	..	919 18 10
Tauraroa	2,735	81	3000	12 Oct., 1911	3,935	"	1,905	..	..	..
Te Akau	14,961	45	1626	11 June, 1908	33,337	Roads and bridges	10,472	10,407	..	10,406 19 2
Te Kauri	3,570	14	544	18 Feb., 1904	2,616	Ditto ..	916	916	..	916 0 0
Te Kuiti	3,506	70	1498	25 July, 1901	2,927	Road-works	777	776	..	776 7 0
Te Pahu	3,228	3	80	18 Jan., 1906	1,711	"	491	491	..	491 0 0
Te Puhi	4,505	73	2109	1 Sept., 1904	4,352	"	1,689	1,689	..	1,689 0 0
Te Puroa	8,042	83	1846	17 Nov., 1898	3,033	"	1,076	1,076	..	1,076 0 0
Te Rerenga	7,991	97	2880	8 Dec., 1904	4,730	"	1,599	1,599	..	1,598 13 9
Te Rerenga Extension ..	764	19	852	12 Mar., 1908	914	"	267	..	..	..
Te Rore	1,943	64	2480	10 Aug., 1911	4,046	Roads and bridges	780	231	426 10 0	657 8 2
Tokanui	793	84	3411	15 Sept., 1910	1,520	Road-works	500	86	210 9 7	296 13 1
Tokatoka	11,653	38	911	26 May, 1898	20,712	Drains and roads	10,765	10,765	..	10,764 12 4
Tokatoka		38	911	26 May, 1898	10,226	Tramway and road-works				
Tokatoka		38	911	26 May, 1898	1,250	Roads and drains				
Tokatoka No. 2	1,733	73	1601	8 Aug., 1901	3,934	Road-works	1,474	1,474	..	1,473 19 4
Tokatoka No. 3	448	14	544	18 Feb., 1904	896	Roads and drains	448	448	..	448 0 0
Tumu-Kaituna	3,187	12	495	19 Feb., 1903	2,550	Drainage-works and bridges over drains	1,275	1,274	..	1,274 7 7
[illegible]uroto	1,783	97	2879	8 Dec., 1904	1,689	Road-works	539	539	..	539 0 0
Umurua	4,866	24	564	7 April, 1898	2,433	"	480	479	..	478 14 11
Umuwhawha	4,513	63	2423	3 Aug., 1911	4,095	Roads and bridges	1,500	95	1,165 17 4	1,260 14 7
Waiawa	16,870	5	94	27 Jan., 1896	8,439	Road-works	3,268	3,266	..	3,266 0 1
Waiharakeke	2,116	27	758	23 Mar., 1905	1,979	"	318	318	..	317 19 7
Waimai	11,554	70	2656	31 Aug., 1911	26,140	Roads and bridges	4,090	..	1,668 12 6	1,668 12 6
Waimana	14,292	46	973	20 June, 1895	5,402	Road-works	2,000	2,000	..	2,000 0 0
Carried forward ..	965,205	..	..	..	635,172	..	196,864	166,653	12,947 9 11	179,598 4 10

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* The figures give the totals to the nearest pound for the year ending 31st March, 1912.

STATEMENT SHOWING THE BLOCKS OF LAND WHICH HAVE BEEN PROCLAIMED UNDER THE NEW ZEALAND STATE GUARANTEED ADVANCES ACT, 1909, AND AMENDMENTS, ETC.—*continued.*

Name of Block.	Area of Block.	Gazetted.			Surveyor-General's Report.			Expenditure.		
		No.	Page.	Date.	Valuation of Block.	Works required to open up such Block.	Estimated Cost proposed to be borrowed.	To Mar. 31, 1912. *	From April 1, 1912, to March 31, 1913.	Total to March 31, 1913.
AUCKLAND LAND DISTRICT—*continued.*										
	Acres.				£		£	£	£ s. d.	£ s. d.
Brought forward ..	965,205	..	..	..	635,172	..	196,864	166,653	12,947 9 11	179,598 4 10
Waimatanui	15,723	20	496	24 Mar., 1898	10,847	Road-works	4,258	4,254	..	4,253 13 8
Waiotahi	6,050	71	2073	25 Aug., 1904	2,273	"	756	751	..	750 13 9
Waiotira	3,226	62	1214	10 Aug., 1893	1,613	"	322	321	..	321 5 8
Waipoua	58,200	74	1419	5 Oct., 1893	29,100	"	5,800	5,799	..	5,799 5 5
Waipu	6,257	65	1398	1 Sept., 1898	1,570	"	790	790	..	790 0 0
Wairere	1,930	79	2299	29 Sept., 1904	1,641	"	483	483	..	483 0 0
Waitahanui	10,899	64	2480	10 Aug., 1911	6,845	Roads and bridges	800	54	743 9 9	797 9 3
Waitawheta	5,885	84	3142	26 Oct., 1911	4,765	Ditto	2,900	..	..	..
Waitoa	5,108	75	2287	30 Aug., 1906	9,332	Road-works	3,830	1,387	..	1,386 14 2
Waiwhatawhata	1,441	26	891	24 Mar, 1910	2,275	"	360	30	322 14 8	353 2 2
Waoku	20,000 2,543	74 17	1298 301	22 Sept., 1892 9 Mar., 1893	10,000 1,462	" "	2,000 395	2,395	..	2,394 17 11
Whakapara	1,089	98	3017	25 Nov., 1909	931	Roads and drains	354	352	..	351 13 11
Whangaingatakupu	975	73	1602	8 Aug., 1901	439	Road-works	170	170	..	169 18 4
Whareorino	16,600	73	1602	8 Aug., 1901	14.525	"	3,075	3,059	..	3,058 14 6
Wharepuhunga	28,999	18 45	335 1137	7 Feb., 1901 18 May, 1905	10,163	"	2,828	2,828	..	2,827 13 0
Wharepuhunga Extension ..	22,153	69	2533	22 Aug., 1912	23,195	Roads and bridges	10,225	..	..	..
Whatitiri No. 1	5,628	51	1113	14 June, 1900	4,830	Road-works	844	843	..	843 6 2
Whirinaki	6,539	71	2703	7 Sept., 1911	3,390	Roads and bridges	1,630	45	1,584 7 2	1,629 12 2
Whitikau	12,457	49	1736	6 June, 1907	10,859	Road-works	4,567	3,978	588 6 3	4,566 7 8
Totals	1,196,907	..	..	..	785,227	..	243,251	194,192	16,186 7 9	210,375 12 7
HAWKE'S BAY LAND DISTRICT.										
Hangaroa	2,880	76	3146	11 Aug., 1910	5,700	Road-works	1,500	1,368	124 6 3	1,492 7 11
Hikurangi No. 2	4,115	82	1663	16 Nov., 1894	3,217	"	520	497	..	497 5 5
Huiarua	7,570	90	1901 1902	21 Oct., 1897	11,355	"	3,000	737	..	736 10 7
Koranga	17,422	58	1991	4 July, 1907	13,649	"	2,613	2,613	..	2,612 18 6
Kumeti	4,521	69	2142	19 Aug., 1909	22,505	Roads and bridges	1,680	1,484	168 19 8	1,653 0 5
Liberal	2,800	83	1388	20 Oct., 1892	2,500	Road-works	400	400	..	400 0 0
Makaretu	6,326	69	2141	19 Aug., 1909	6,959	"	3,041	2,733	154 2 6	2,887 12 6
Manawaangiangi	11,540	13	691	15 Feb., 1912	48,000	"	6,000	..	3,603 18 3	3,603 18 3
Mangapoike..	14,628	24	521	28 Feb., 1901	8,260	"	1,834	1,834	..	1,833 18 2
Mangatera	47	62	1,790	23 June, 1910	985	"	130	130	..	129 12 2
Mangatoro, Block I	1,700	38	857	3 May, 1900	1,329	"	425	425	..	424 19 5
Mangatoro 1A No. 1	5,016	60	1537	29 June, 1905	32,104	"	1,348	1,348	..	1,347 19 8
Moanui	24,865	59	1620	23 July, 1903	14,000	"	3,108	3,101	..	3,101 4 6
Motu	33,045	23	479	18 Mar., 1892	16,773	"	2,475	2,475	..	2,475 0 0
Ngapaeruru .. Ngapaeruru No. 2 ..	44,816	86 20	1914 548	1 Dec., 1898 15 Mar., 1900	26,370	"	11,000	11,000	..	11,000 0 0
Ngatapa	19,649	40	1341	5 May, 1910	27,000	"	7,410	5,955	1,794 2 10	7,749 9 10
Nuhaka North	9,549	80	1365	13 Oct., 1892	4,632	"	568	568	..	568 0 0
Nuhaka No. 2	777	68	1324	7 Sept., 1893	486	"	58	58	..	58 0 0
Nuhaka No. 3	4,138	24	522	28 Feb., 1901	5,351	"	1,034	1,031	..	1,030 18 5
Piripiri	8,276	13	475	18 Feb., 1909	53,356	Roads and bridges	4,132	4,132	..	4,132 0 0
Piripiri No. 1	1,152	100	3648	7 Dec., 1911	864	Road-works	285	..	283 14 7	283 14 7
Pohui	4,306	90	1521	11 Nov., 1892	3,655	"	538	538	..	538 0 0
Rokai	1,785	71	2045	28 July, 1910	10,710	Roads and bridges	2,815	818	723 13 7	1,542 2 11
Ruahine	5,154	61	1291	16 Aug., 1894	2,704	Road-works	840	824	..	824 1 9
Ruakituri	4,855	46	939 955	21 June, 1894	4,575	"	364	364	..	364 0 0
Tahora No. 2 South	43,037	24	522	28 Feb., 1901	16,139	"	4,304	..	..	..
Tamaki	3,443	41 83	1042 2222	4 May, 1905 14 Sept., 1905	48,345	"	3,440	3,340	..	3,340 0 0
Tamaki No. 1	3,042	67	2305	1 Aug., 1907	21,877	Roads and bridges	3,043	3,032	..	3,031 16 [illegible]
Tauwharetoi	9,404	68	1324	7 Sept., 1893	4,796	Road-works	1,175	1,169	..	1,169 0 0
Te Whitiatara	1,277	13	692	15 Feb., 1912	11,131	"	250	..	851 3 9	851 3 9
Tuahu	16,723	67	1859	27 Aug., 1903	6,288	"	2,352	2,350	..	2,350 7 5
Tutamoe	3,073	58	1992	4 July, 1907	5,384	"	1,536	1,536	..	1,535 19 9
Umutaoroa	1,461	49	939	22 June, 1893	956	"	100	100	..	100 0 0
Waiau	8,961	23	412	30 Mar., 1893	4,215	"	1,405	1,183	..	1,182 14 6
Waihau	691	78	3193	18 Aug., 1910	1,036	"	100	..	..	..
Carried forward ..	332,044	..	..	..	447,206	..	74,823	57,143	7,704 1 5	64,847 17 2

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* The figures give the totals to the nearest pound for the year ending 31st March, 1912.

STATEMENT SHOWING THE BLOCKS OF LAND WHICH HAVE BEEN PROCLAIMED UNDER THE NEW ZEALAND STATE-GUARANTEED ADVANCES ACT, 1909, AND AMENDMENTS, ETC.—*continued.*

Name of Block.	Area of Block.	Gazetted.			Surveyor-General's Report.			Expenditure.		
		No.	Page.	Date.	Valuation of Block.	Works required to open up such Block.	Estimated Cost proposed to be borrowed.	To Mar. 31, 1912. *	From April 1, 1912, to March 31, 1913.	Total to March 31, 1913
HAWKE'S BAY LAND DISTRICT—*continued.*										
	Acres.				£		£	£	£ s. d.	£ s. d.
Brought forward	332,044	..	..	..	447,206	..	74,823	57,143	7,704 1 5	64,847 17 2
Waimarama	8,490	11	395	11 Feb., 1909	64,167	Roads and bridges	6,028	5,827	..	5,827 5 10
Waipaoa	10,732	67	2305	1 Aug., 1907	10,439	Ditto	3,279	3,143	48 4 1	3,191 2 11
Waitahaia	13,820	52	1619	23 July, 1903	8,660	Road-works	2,990	2,990	..	2,990 0 0
Whakapaupakihi	14,379	52	1619	23 July, 1903	12,498	"	1,798	1,798	..	1,797 18 8
Wharekopae–Tahora No. 2	14,401	24	522	28 Feb., 1901	11,869	"	1,440	1,432	..	1,431 18 0
Woodville	254	49	939	22 June, 1893	286	"	25	25	..	25 0 0
Totals	394,120	..	..	..	555,125	..	90,383	72,358	7,752 5 6	80,111 2 7
TARANAKI LAND DISTRICT.										
Aorangi	3,842	75	2153	8 Sept., 1904	2,519	Road-works	1,160	1,159	..	1,158 18 5
Ararimu	6,521	69	2534	22 Aug., 1912	12,270	"	5,000	..	160 0 1	160 0 1
Aria	39	93	3006	26 Nov., 1908	532	"	265	265	..	264 19 8
Autawa	4,725	21	393	23 Mar., 1893	4,276	"	1,153	1,153	..	1,153 0 0
Eao	17,218	77	2191	2 Oct., 1902	13,890	"	6,361	6,361	..	6,361 0 0
Egmont, Block VI	1,683	57	1163	26 July, 1894	1,721	"	421	421	..	421 0 0
Eltham	3,200	19	340	16 Mar., 1893	3,150	"	800	800	..	800 0 0
Gatton	3,800	19	340	16 Mar., 1893	3,860	"	950	950	..	950 0 0
Huiroa	6,433	72	1273	15 Sept., 1892	5,318	"	2,093	2,093	..	2,093 0 0
Hurimoana	3,190	79	1774	3 Nov., 1898	2,981	"	797	797	..	797 0 0
Iriwhata	7,564	76	2348	16 Sept., 1909	10,490	Roads and bridges	5,135	5,041	91 7 3	5,132 7 4
Kahuwera	6,264	84	2532	7 Sept., 1909	8,804	Road-works	2,925	3,127	..	3,127 0 0
Kaimanuka	9,987	72	1273	15 Sept., 1892	5,350	"	2,665	2,665	..	2,665 0 0
Kaipikari	4,273	79	1775	3 Nov., 1898	2,136	"	582	582	..	582 0 0
Kaitangiwhenua No. 2	33,430	27	510	5 April, 1894	15,667	"	6,393	6,393	..	6,393 0 0
Kaitangiwhenua Special Settlement	7,747	1	4	7 Jan., 1904	4,209	"	1,491	1,491	..	1,491 0 0
Kaupokonui	230	62	1215	10 Aug., 1893	230	"	58	58	..	58 0 0
Kohuratahi	3,548	79	1774	3 Nov., 1898	3,019	"	738	738	..	738 0 0
Kuraiti	4,465	14	360	15 Feb., 1900	1,855	"	617	617	..	617 0 0
Kuri	13,989	75	2153	8 Sept., 1904	4,921	"	1,985	1,984	..	1,984 2 0
Kururau	11,808	86	2323	28 Sept., 1905	7,568	"	3,490	3,489	..	3,489 6 10
Lepperton	2,775	83	1383	20 Oct., 1892	2,998	"	966	966	..	966 0 0
Llewellyn	4,594	15	397	9 Mar., 1896	3,445	"	862	862	..	862 0 0
Maben	4,680	65	1871	4 Aug., 1904	2,341	"	900	900	..	900 0 0
Makahu	6,551	66	1361	27 Aug., 1896	6,180	"	1,468	1,468	..	1,468 0 0
Makino	8,608	24	521	28 Feb., 1901	3,787	"	1,860	1,860	..	1,860 0 0
Mangaehu	492	72	1273	15 Sept., 1892	604	"	301	301	..	301 0 0
Mangaere	7,432	30	526	27 April, 1893	9,485	"	4,144	4,144	..	4,144 0 0
Mangamingi	6,629	15	336	18 Feb. 1892	9,040	"	4,286	4,286	..	4,286 0 0
Manganui-Egmont	2,833	72	1510	4 Oct., 1894	3,597	"	894	894	..	894 0 0
Mangaowata	10,623	77	2191	2 Oct., 1902	7,126	"	2,280	2,268	12 4 9	2,279 19 8
Mangaroa	4,969	77	2192	2 Oct., 1902	4,560	Roads and bridges	1,225	1,225	..	1,225 0 0
Mangaroa Township	14	98	3018	25 Nov., 1909	850	Road-works	320	320	..	320 0 0
Mangatawa	6,804	2	3	9 Jan., 1902	3,796	"	1,270	1,270	..	1,269 19 8
Marangae	6,439	32	1024	15 April, 1909	5,447	Roads and bridge	2,720	2,719	..	2,719 5 6
Marco	6,463	13	382	16 Feb., 1899	4,038	Road-works	1,027	1,027	..	1,027 0 0
Mataro	1,486	42	953	18 May, 1899	668	"	260	260	..	260 0 0
Matire Village	15	98	3017	25 Nov., 1909	406	"	180	180	..	180 0 0
Matiere Township (No. 2)	9	60	2133	19 July, 1912	90	"	50	..	..	..
Mauku	1,893	91	2031	2 Nov., 1899	1,136	"	284	284	..	284 0 0
Milsom	6,681	21	374	23 Mar., 1893	6,232	"	1,750	1,750	..	1,750 0 0
Mohakatino	4,600	42	1513	28 May, 1908	3,475	"	1,700	432	501 7 3	933 16 10
Mokau-Ohura	41,475	30	1007	14 April, 1904	27,175	"	12,595	12,595	..	12,595 0 0
Moki	8,734	99	2178	6 Dec., 1900	4,708	"	1,822	1,822	..	1,822 0 0
Ngatimaru, Blocks V, IX	4,565	23	412	30 Mar., 1893	4,745	"	1,940	1,940	..	1,940 0 0
Okoke	13,893	51	1049	5 July, 1894	9,275	"	2,369	2,367	..	2,366 11 1
Opaku-Kapara	17,496	4	26	12 Jan., 1893	6,996	"	2,793	2,793	..	2,793 0 0
Opatu	3,810	103	4,108	1 Dec., 1910	5,810	"	2,760	1,950	613 15 9	2,563 15 11
Orongomai	10,105	100	3648	7 Dec., 1911	17,490	"	8,000	..	3,512 1 0	3,512 1 0
Otunui	14,747	19	838	12 Mar., 1908	14,573	Roads and bridges	6,970	5,933	30 16 1	5,964 2 9
Oxford	4,000	4	23	12 Jan., 1893	3,550	Road-works	1,200	1,200	..	1,200 0 0
Paraketu	3,345	72	2239	2 Sept., 1909	2,725	Roads and bridges	1,320	1,320	..	1,320 0 0
Patua	9,692	24	667	11 Mar., 1897	6,542	Road-works	1,636	1,636	..	1,635 19 10
Patupuremu	17,966	77	2190–1	2 Oct., 1902	8,160	"	3,580	3,580	..	3,580 0 0
Piko	10,276	43	1009	25 May, 1899	6,928	"	1,784	1,782	..	1,782 7 9
Carried forward	408,650	..	..	..	312,744	..	122,595	106,518	4,921 12 2	111,440 14 4

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* The figures give the totals to the nearest pound for the year ending 31st March, 1912.

Statement showing the Blocks of Land which have been proclaimed under the New Zealand State-guaranteed Advances Act, 1909, and Amendments, Etc.—*continued.*

Name of Block.	Area of Block.	Gazetted.			Surveyor-General's Report.			Expenditure.		
		No.	Page.	Date.	Valuation of Block.	Works required to open up such Block.	Estimated Cost proposed to be borrowed.	To Mar. 31, 1912. *	From April 1, 1912, to March 31, 1913.	Total to March 31, 1913
TARANAKI LAND DISTRICT—*continued.*										
	Acres.				£		£	£	£ s. d.	£ s. d.
Brought forward	408,650	..	..	..	312,744	..	122,595	106,518	4,921 12 2	111,440 14 4
Poarangi	3,835	14	361	15 Feb., 1900	2,419	Road-works	550	550	..	550 0 0
Puniwhakau	10,641	19	340	16 Mar., 1893	7,615	"	1,926	1,926	..	1,926 0 0
Putiki	6,595	64	1358	27 July, 1899	3,620	"	1,144	1,143	..	1,143 7 2
Putikituna	4,229	14	360	15 Feb., 1900	2,664	"	789	789	..	789 0 0
Rangiwhakaoma	9,974	72	1501	4 Oct., 1894	3,823	"	1,421	1,421	..	1,421 0 0
Raoraomouku	12,225	71	2704	7 Sept., 1911	11,104	"	5,510	..	..	..
Rerekapa-Moanatairi	21,375	77	2189	2 Oct., 1902	12,182	Roads and bridges	5,835	5,835	..	5,834 19 10
Rimuputa	5,609	77	1715	27 Oct., 1898	3,229	Road-works	799	799	..	799 0 0
Ross	1,912	34	760	9 May, 1895	2,564	"	478	476	..	476 2 6
Tahora	2,311	90	1977	17 Oct., 1901	1,422	"	471	471	..	471 0 0
Tahuna	16,642	98	3018	25 Nov., 1909	26,517	"	12,850	12,325	521 12 11	12,846 17 0
Tangitu	11,805	90	1977	17 Oct., 1901	7,463	"	2,140	2,140	..	2,140 0 0
Tanner	5,200	78	1361	10 Oct., 1892	5,950	"	1,780	1,780	..	1,780 0 0
Taurakawa	9,145	23	891	20 Mar., 1913	8,450	"	4,220	..	883 10 0	883 10 0
Taumata	8,223	84	2261	21 Sept., 1905	3,812	"	1,616	1,616	..	1,615 19 4
Taurangi	21,500	77 30	2191 1007	2 Oct., 1902 14 April, 1904	12,976	Roads and bridges	5,865	5,864	..	5,863 15 10
Terrace End	10,393	60	1245	15 Aug., 1895	8,739	Road-works	2,173	2,173	..	2,173 0 0
Tirangi	8,098	77	2192	2 Oct., 1902	3,563	"	1,620	1,620	..	1,620 0 0
Upper Waitara	840	13	240	23 Feb., 1893	1,914	"	126	126	..	126 0 0
Vera	2,429	77	2189	2 Oct., 1902	1,488	"	320	320	..	320 0 0
Waiaraia	16,797	81	2343	6 Oct., 1904	9,163	"	4,010	4,010	..	4,010 0 0
Waikaka	4,016	77	2190	2 Oct., 1902	3,254	Roads and bridges	960	960	..	960 0 0
Waikekeho	590	72	1522	16 Aug., 1900	1,178	Road-works	419	419	..	418 16 9
Waikiekie	600	78	1698	15 Oct., 1896	788	"	150	150	..	150 0 0
Waingarara	1,634	78	1666	6 Sept., 1900	1,111	"	373	373	..	372 16 4
Waitangata	10,562	77	2190	2 Oct., 1902	8,617	"	2,575	2,547	..	2,547 3 6
Waro	11,244	52	1620	23 July, 1903	6,678	"	3,210	3,210	..	3,210 0 0
Whakaihuwaka	6,912	9	3393	16 Nov., 1911	9,280	"	4,600	..	370 14 2	370 14 2
Whenuakura	10,927	19 4	340 57	16 Mar., 1893 10 Jan., 1901	5,652	"	1,690	1,690	..	1,690 0 0
Totals	644,913	..	..	..	489,979	..	192,215	161,251	6,697 9 3	167,949 16 9
WELLINGTON LAND DISTRICT.										
Ahuahu	28,999	61	1682	30 Aug., 1903	15,115	Roads and bridges	7,250	7,250	..	7,249 19 7
Awarua 1B	18,291	104	2723	23 Nov., 1905	16,132	Ditto ..	6,610	6,599	170 14 5	6,769 18 10
	3,531	70	2656	31 Aug., 1911	19,110	Road-works	1,200	333	..	333 8 10
Clifton No. 1	4,650	28	539	31 Mar., 1892	4,081	"	1,163	1,163	..	1,163 0 0
Dannevirke Centennial	11,022	19	340	16 Mar., 1893	5,233	"	2,494	2,494	..	2,493 19 10
East Puketoi	83,500	23	479	18 Mar., 1892	83,500	"	19,375	19,375	..	19,375 0 0
Gladstone	7,597	24	482	28 Mar., 1894	5,822	"	1,899	1,898	..	1,898 8 3
Hall	3,175	19	340	16 Mar., 1893	4,871	"	794	794	..	794 0 0
Hautapu, Blocks XI, XIV, XV	6,188	92	1567	24 Nov., 1892	5,469	"	1,573	1,567	..	1,567 0 0
Hautapu No. 2	6,895	65	1272	24 Aug., 1894	7,207	"	1,714	1,714	..	1,713 15 10
Hautapu-Ruahine	19,804	74	1297	22 Sept., 1892	22,154	"	6,931	6,932	.	6,931 12 3
Hautapu-Ruahine No. 2	16,771	87	1841	28 Nov., 1895	11,152	"	4,192	4,192	..	4,192 0 0
Hikimutu	16,290	49	1735	6 June, 1907	21,126	"	4,072	4,067	..	4,067 4 7
Horopito	400	72	1505	2 Oct., 1894	350	"	100	..	..	..
Horopito West	365	81	2661 2670 2673	22 Oct., 1908	9,861	"	2,731	407	290 2 10	696 16 7
Kaiparoro	9,409	60	1245	15 Aug., 1895	6,414	"	1,274	1,261	11 19 5	1,273 9 5
Kaiparoro No. 2	400	30	773	1 April, 1897	150	"	50	50	..	50 0 0
Kaitangata	7,105	89	1863	5 Dec., 1895	4,215	"	884	884	..	884 0 0
Kaitieke	45,500	12	283	14 Feb., 1895	41,700	"	11,375	11,374	..	11,373 15 10
Kaitieke Township	18	60	2134	4 July, 1912	618	"	250	..	13 4 0	13 4 0
Kaiwaka, Blocks IV, VIII, XI	4,789	4	56	10 Jan., 1901	1,768	"	598	598	..	598 0 0
Kakahi Village Settlement	17	73 81	2497 2670	24 Sept., 1908 22 Oct., 1908	710	"	231	141	76 17 1	217 14 0
Kakahi Village Settlement No. 2	27	63	2424	3 Aug., 1911	522	"	90	..	..	..
Kakariki	5,000	23	413	30 Mar., 1893	5,786	"	1,562	1,562	..	1,562 0 0
Kawautahi	7,677	49	1736	6 June, 1907	10,814	"	1,919	1,919	..	1,919 3 2
Kawhatau	5,644	94	1951	21 Dec., 1894	6,625	"	1,425	1,425	..	1,425 0 0
Kirikau	13,642	49	1736	6 June, 1907	18,584	"	3,410	3,400	..	3,399 10 4
Makaretu Village Settlement	176	70	2030	21 July, 1910	3,290	"	400	256	131 6 2	387 14 1
Makotuku, Block III	1,608	1	4	7 Jan., 1904	1,860	"	402	402	..	402 0 0
Malton Farm Homestead	1,208	80	1637	8 Oct., 1894	944	"	302	302	..	302 0 0
Manganui and Ruapehu	7,350	46	958	21 June, 1894	6,337	"	1,838	1,838	..	1,838 0 0
Carried forward	337,048	..	..	..	341,520	..	88,108	84,197	694 3 11	84,891 15 5

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* The figures give the totals to the nearest pound for the year ending 31st March, 1912.

STATEMENT SHOWING THE BLOCKS OF LAND WHICH HAVE BEEN PROCLAIMED UNDER THE NEW ZEALAND STATE-GUARANTEED ADVANCES ACT, 1909, AND AMENDMENTS, ETC.—*continued.*

Name of Block.	Area of Block.	Gazetted.			Surveyor-General's Report.			Expenditure.		
		No.	Page.	Date.	Valuation of Block.	Works required to open up such Block.	Estimated Cost proposed to be borrowed.	To Mar. 31, 1912. *	From April 1, 1912, to March 31, 1913.	Total to March 31, 1913
WELLINGTON LAND DISTRICT—*continued.*										
	Acres.				£		£	£	£ s. d.	£ s. d.
Brought forward ..	337,048	..	..	..	341,520	..	88,108	84,197	694 3 11	84,891 15 5
Mangatiti	15,099	26	892	24 Mar., 1910	20,320	Road-works	8,180	2,577	1,954 11 1	4,531 8 3
Mangoira-Coal Creek ..	6,500	74	1297	22 Sept., 1892	8,204	„	2,031	2,030	..	2,030 0 0
Manunui Township	10	60	2134	19 July, 1912	654	„	145	..	..	..
Marton No. 3	9,078	79	2162	8 Oct., 1903	8,050	„	2,270	2,270	..	2,270 0 0
Maungakaretu	508	7	273	1 Feb., 1906	1,311	„	254	254	..	254 0 0
Mawaihakona Township ..	27	106	4166	8 Dec., 1910	3,390	„	400	1	..	1 4 0
Mecalickstone	6,011	19	339	16 Mar., 1893	4,834	„	1,503	1,503	..	1,503 0 0
Momahaki	526	72	1274	15 Sept., 1892	440	„	156	156	..	156 0 0
Momahaki Village Settlement	824	7	131	25 Jan., 1894	6,311	„	1,360	1,360	..	1,360 0 0
Morinui	21,535	70	2655	31 Aug., 1911	24,080	„	15,870	..	747 13 3	747 13 3
Mount Baker	8,291	15	336	18 Feb., 1892	8,710	„	2,487	2,487	..	2,487 0 0
Mowhanau Village Settlement	380	7	255	29 Jan., 1903	5,320	„	380	378	..	378 7 9
Ngamatea-Maungakaretu ..	8,315	4	55	10 Jan., 1901	6,491	„	2,078	2,078	..	2,078 0 0
Ngaurukehu	1,092	4	55	10 Jan., 1901	1,092	„	409	409	..	408 19 2
Nireaha Village Settlement ..	552	74	2619	22 Aug., 1907	5,648	Roads and drains	250	250	..	249 18 4
North-east Puketoi	13,300	15	336	18 Feb., 1892	16,455	Road-works	3,990	3,990	..	3,990 0 0
North Waimarino	16,381	21	977	16 Mar., 1911	21,709	„	9,730	2,007	2,093 16 0	4,100 10 2
Ohakune No. 2	10	32	1024	15 April, 1909	1,433	„	472	284	162 13 8	447 3 0
Ohakune Village Settlement ..	539	81	2669 2697	22 Oct., 1908	6,434	„	2,776	2,737	..	2,737 7 9
Ohinewairua	7,462	11	242	28 Jan., 1897	7,491	„	1,865	1,864	..	1,864 1 3
Ohinewairua, Block XIII ..	876	4	55–6	10 Jan., 1901	2,734	„	481	481	..	481 0 0
Ohinewairua-Pukeokahu ..	9,785	4	56	10 Jan., 1901	9,330	„	2,935	2,935	..	2,935 0 0
Omahine, Block I	455	8	152	2 Feb., 1893	341	„	114	114	..	114 0 0
Onslow	2,405	34	640	28 April, 1892	1,327	„	601	600	..	600 0 0
Oraukura	4,456	78	1803	21 Sept. 1899	6,691	„	1,114	1,114	..	1,114 0 0
Oroua-Coal Creek	5,630	15	336	18 Feb., 1892	6,178	„	1,050	1,050	..	1,050 0 0
Owhango	35	81	2371 2374	22 Oct., 1908	1,600	„	795	616	..	615 14 7
Owhango Township Extension No. 1	11	52	1890	13 June, 1912	5,465	„	610	..	92 17 3	92 17 3
Palmerston North Knights of Labour	10,995	28	539	31 Mar., 1892	12,222	„	2,749	2,749	..	2,749 0 0
Pohangina	4,722	28	539	31 Mar., 1892	4,250	„	1,181	1,181	..	1,181 0 0
Pohonuiatane	27,754	19	340	16 Mar., 1893	26,476	„	6,959	6,958	..	6,958 6 0
Pukeokahu	11,379	87 10	1841 283	28 Nov., 1895 13 Feb., 1896	11,957	„	2,844	2,844	..	2,844 0 0
Puketoi-Aohanga	1,277	92	1933	19 Dec., 1895	1,027	„	319	319	..	319 0 0
Rangataua	153	73 81	2497 2671 2674	24 Sept., 1908 22 Oct., 1908	4,418	„	1,913	1,586	156 7 7	1,742 17 9
Rangataua No. 1	3	11	446	3 Feb., 1910	705	„	100	77	..	77 3 2
Rangitatau	9,964	62	1930	29 July, 1909	19,530	Roads and bridges	9,580	3,817	3,969 1 7	7,785 16 10
Raupiu	3,080	49	1433	25 June, 1903	2,457	Road-works	385	385	..	385 0 0
Retaruke	16,055	49	1736	6 June, 1907	20,386	„	4,014	3,986	..	3,986 7 2
Riariaki	20,085	26	892	24 Mar., 1910	25,990	„	10,420	4,074	1,853 17 0	5,927 18 4
Raurimu Township Extension	201	60	2134	4 July, 1912	938	„	185	..	..	..
Ruatiti	14,185	85	2649	11 Oct., 1906	22,055	„	11,000	7,012	2,487 16 9	9,499 15 6
Salisbury and Delaware ..	13,392	28	539	31 Mar., 1892	14,257	„	3,348	3,348	..	3,348 0 0
Sommerville	8,566	28	539	31 Mar., 1892	9,085	„	2,142	2,142	..	2,142 0 0
South Kaitieke	9,612	62	1738	6 Aug., 1903	5,357	„	2,403	2,403	..	2,403 0 0
Stirling	4,770	28	539	31 Mar., 1892	6,678	„	1,193	1,192	..	1,192 0 0
Taihape Village Settlement Extension	117	1	3, 4	7 Jan., 1904	278	„	117	117	..	117 0 0
Taonui-Maraetaua-Pukewhakapu	9,799	49	1186	25 May, 1905	8,893	„	2,450	1,502	950 0 0	2,452 5 4
Tapui Settlement	1,267	85 15 17	2486 560 677	27 Oct., 1904 14 Feb., 1907 21 Feb., 1907	1,724	„	474	474	..	474 0 0
Tararua	3,993	19	340	16 Mar., 1893	4,592	„	998	998	..	998 0 0
Tauakira	20,895	72	1522	16 Aug., 1900	18,264	„	4,397	2,711	931 13 4	3,642 14 7
Te Mara	18,700	56	1092	13 July, 1893	2,384	„	436	428	..	427 16 3
Te Ngaue	1,470	54	1106	16 July, 1896	1,286	„	367	367	..	367 0 0
Te Ruanui	1,545	4	55	10 Jan., 1901	4,256	„	386	386	..	386 0 0
Tiriraukawa-Hautapu ..	5,622	4	56	10 Jan., 1901	5,250	„	1,686	1,686	..	1,686 0 0
Tupapanui	2,614	65	2090	2 Aug., 1906	2,614	„	653	652	..	652 5 10
Umutoi	2,200	28	539	31 Mar., 1892	1,675	„	550	550	..	550 0 0
Upper Makohine	14,201	24	564	7 April, 1898	15,851	„	3,230	3,230	..	3,229 19 11
Waimarino	20,900	15	336	18 Feb., 1892	16,880	„	7,837	7,836	..	7,835 10 6
Waiwera	3,900	23	413	30 Mar., 1893	4,101	„	1,460	1,460	..	1,460 0 0
Wanganui	6,222	19	340	16 Mar., 1893	6,046	„	1,556	1,556	..	1,556 0 0
Wellington Fruit-growers' Association	2,608	72	1274	15 Sept., 1892	8,543	„	1,304	1,304	..	1,304 0 0
Totals	749,387	..	..	..	823,988	..	241,050	187,071	16,094 11 5	203,168 17 4

* The figures give the totals to the nearest pound for the year ending 31st March, 1912.

Statement showing the Blocks of Land which have been proclaimed under the New Zealand State-guaranteed Advances Act, 1909, and Amendments, Etc.—*continued.*

Name of Block.	Area of Block.	Gazetted.			Surveyor-General's Report.			Expenditure.		
		No.	Page.	Date.	Valuation of Block.	Works required to open up such Block.	Estimated Cost proposed to be borrowed.	To Mar. 31, 1912. *	From April 1, 1912, to March 31, 1913.	Total to March 31, 1913.
NELSON LAND DISTRICT.										
	Acres.				£		£	£	£ s. d.	£ s. d.
Anatoki	4,400	47	1541	10 June, 1909	1,980	Road-works	220	..	..	..
Big Bush	14,455	73	2229 2230	23 Aug., 1906	4,588	„	715	715	..	715 0 0
Brewerton	3,757	107	2815	7 Dec., 1905	1,256	„	197	189	..	188 18 5
Brighton	1,507	86	2323	28 Sept., 1905	1,174	„	188	188	..	188 0 0
Brighton No. 2	9,484	38	1390	25 April, 1912	4,640	„	2,320	..	92 8 2	92 8 2
Dart	7,931	12	611–12	20 Feb., 1908	2,758	„	594	583	..	583 9 3
Glenroy	13,127	58	2010	4 July, 1907	4,488	„	984	984	..	983 16 8
Heaphy	13,030	109	2862	14 Dec., 1905	4,029	„	1,344	..	..	..
Hope	3,311	99	2638	16 Nov., 1905	828	„	248	122	49 16 11	171 8 5
Howard	17,625 3,110	70 22	2005 1046	21 July, 1910 23 Mar., 1911	8,513 1,792	„ „	1,465 260	151	294 12 11	445 10 1
Inangahua	3,184	90	2423	19 Oct., 1905	1,701	„	781	780	..	780 6 0
Inangahua Junction	4,220	1	5	9 Jan., 1908	2,320	„	1,055	383	636 4 9	1,019 10 1
Kongahu	15,794	90	2424	19 Oct., 1905	6,152	„	2,735	2,728	6 10 0	2,734 18 5
Lee River	2,516	84	2276	21 Sept., 1905	629	Roads and bridges	314	314	..	313 15 9
Lee River Extension	10,185	32	1023	15 April, 1909	4,450	Road-works	763	407	92 8 4	499 12 0
Mai-mai	5,150	52	1890	13 June, 1912	1,611	„	485	..	..	..
Mangles–Blackwater	8,108	67	2308	27 Aug., 1908	3,839	„	608	455	56 12 0	511 7 7
Maruia	22,445	90	2422	19 Oct., 1905	8,259	„	3,143	3,124	..	3,123 14 1
Maruia North	19,188	60	1946	19 July, 1906	6,220	„	3,110	3,109	..	3,108 11 9
Matakitaki	4,728	102	3150	17 Dec., 1908	1,773	„	591	486	24 0 0	510 0 1
Matiri	11,620	90 15	2423 569	19 Oct., 1905 14 Feb., 1907	4,386	„	1,536	1,487	..	1,487 0 0
Matiri East	9,361	3 17	80 649	18 Jan., 1906 1 Mar., 1906	2,819	Roads and bridges	701	701	..	701 0 0
Maungatapu	2,632	42	1467	9 May, 1907	1,135	Road-works	197	197	..	196 19 6
Mid Maruia	21,750	47	1673	30 May, 1907	9,663	„	2,175	1,860	149 14 7	2,010 2 6
Mokihinui	8,013	90	2425	19 Oct., 1905	3,160	„	1,133	1,130	..	1,129 16 3
Mount Arthur	4,350	90	2423	19 Oct., 1905	1,087	„	326	326	..	326 0 0
Mount Arthur No. 2	14,484	90	1523	11 Nov., 1892	4,345	„	1,086	1,050	..	1,049 17 7
Murchison Village Settlement	31	2	12, 13	10 Jan., 1907	258	„	62	27	34 10 0	61 15 0
Nuggety	5,698	93	2992	26 Nov., 1908	2,407	„	712	..	..	..
Oparara	19,635	99	2638	16 Nov., 1905	7,076	„	2,699	469	..	469 4 2
Orikaka	20,052	95	2528	2 Nov., 1905	5,184	„	2,506	..	..	..
Otumahana	20,824	90	2424	19 Oct., 1905	6,069	„	2,603	1,681	458 1 8	2,138 17 2
Owen	5,233	95	2528	2 Nov., 1905	1,538	„	623	623	..	622 19 6
Owen East	7,707	109	2862	14 Dec., 1905	2,473	„	549	547	..	546 19 3
Rainy River	9,584	95	2528	2 Nov., 1905	3,093	„	726	713	..	712 15 3
Rappahannock	7,109	47	1674	30 May, 1907	2,658	„	711	671	39 17 1	710 16 1
Spooner Range	3,793	75	2287	30 Aug., 1906	1,092	„	96	54	..	53 10 7
Steeples	993	52	1890	13 June, 1912	620	„	310	..	5 15 0	5 15 0
Tadmor	2,109	14	592	22 Feb., 1906	724	„	116	116	..	116 0 0
Totaranui	7,319	99	2639	16 Nov., 1905	2,037	„	566	105	..	104 16 4
Totaranui Extension	228	17	649	1 Mar., 1906						
Totaranui No. 3	1,990	104	3150	18 Dec., 1906	895	„	100	..	..	..
Upper Aorere	3,475	47	1688	18 June, 1908	1,043	„	87	84	..	84 6 7
Wairoa Forks	7,978	26	958	9 April, 1903	1,995	„	576	576	..	576 0 0
Wairoa Forks Extension	8,395	76	2347	17 Sept., 1909	4,302	„	314	..	..	..
Wangamoa	11,940	93	2992	26 Nov., 1908	5,371	„	298	147	1 5 0	151 6 8
Wareatea	829	112	2950	21 Dec., 1905	326	„	163	..	..	..
Warwick	5,821	47	1673	30 May, 1907	2,338	Roads and bridges	582	123	89 5 9	212 4 3
Westport	2,272	104	2723	23 Nov., 1905	849	Road-works	332	321	..	320 15 2
Totals	412,480	..	..	..	151,943	..	44,005	27,726	2,031 2 2	29,759 3 7
MARLBOROUGH LAND DISTRICT.										
Bartlett's Creek	4,481	46	1357	11 June, 1903	1,617	Road-works	404	404	..	403 19 5
Blue Mountain	5,577	26	891	24 Mar., 1910	6,900	Roads and bridge	400	206	67 1 5	273 8 4
Hundalee	38,329	30 97	773 2081	1 April, 1897 18 Nov., 1897	24,540	Road-works	7,500	7,500	..	7,500 0 0
Kaitao	9,436	30	729	6 April, 1899	5,676	„	2,500	2,500	..	2,499 17 5
Mahakipawa	2,258	26	891	24 Mar., 1910	1,260	„	200	8/–	..	0 8 0
Neutral Spur	13,210	63	2423	3 Aug., 1911	6,000	„	500	77	40 0 0	116 10 11
Pine Valley	19,744	68	1477	10 Aug., 1899	7,452	„	1,863	1,447	..	1,446 10 2
Puhipuhi	36,329	91	2022	20 Dec., 1898	15,709	„	4,169	4,169	..	4,169 0 0
Rimu Gully	1,456	58	1991	4 July, 1907	1,918	„	639	612	20 14 3	632 14 4
Ronga Valley No. 1	588	81	2659	22 Oct., 1908	1,615	„	150	149	..	148 17 9
Ronga Valley No. 2	2,781	6	254	26 Jan., 1911	3,375	„	1,120	387	427 17 9	815 1 3
Stag and Spey	12,246	34	821	4 April, 1901	11,148	„	2,787	2,787	..	2,787 0 0
Tinline	1,650	18	527	6 Mar., 1902	805	„	201	201	..	200 18 6
Waipapa	49,410	2	4	9 Jan., 1902	17,662	„	1,766	1,764	..	1,764 0 0
Wakamarina	14,076	6	254	26 Jan., 1911	4,060	„	1,300	..	..	..
Totals	211,571	..	..	..	109,737	..	25,499	22,203	555 13 5	22,758 6 1

* The figures give the totals to the nearest pound for the year ending 31st March, 1912.

STATEMENT SHOWING THE BLOCKS OF LAND WHICH HAVE BEEN PROCLAIMED UNDER THE NEW ZEALAND STATE-GUARANTEED ADVANCES ACT, 1909, AND AMENDMENTS, ETC.—*continued.*

Name of Block.	Area of Block.	Gazetted.			Surveyor-General's Report.			Expenditure.		
		No.	Page.	Date.	Valuation of Block.	Works required to open up such Block.	Estimated Cost proposed to be borrowed.	To Mar. 31, 1912. *	From April 1, 1912, to March 31, 1913.	Total to March 31, 1913.
				WESTLAND LAND DISTRICT.						
	Acres.				£		£	£	£ s. d.	£ s. d.
Arnold Valley	7,750	76	2347	16 Sept., 1909	3,075	Road-works	800	797	..	796 13 7
Bruce Bay	2,806	20	894	19 Mar., 1908	800	"	240	240	..	239 18 9
Clearwater	772	83	2708	29 Oct., 1908	312	"	75	75	..	74 18 9
Haast River	2,527	83	2709	29 Oct., 1908	1,200	"	100	100	..	99 19 6
Kakapotahi	971	69	2141	19 Aug., 1909	585	"	125	..	125 0 0	125 0 0
Kotuku	2,086	107	4206	15 Dec., 1910	987	"	310	310	..	310 0 0
Lower Waiho	4,479	57	1784	8 July, 1909	2,320	"	100	100	..	100 0 0
Middle Bush	1,482	103	4108	1 Dec., 1910	670	"	100	..	..	..
Mount Bonar	747	73	2226	23 Aug., 1906	250	"	100	100	..	99 19 9
Mount Hercules	653	62	1930	29 July, 1909	410	"	50	..	..	..
Okuru	1,044	59	2026	30 July, 1908	300	"	100	96	..	96 2 6
Punakaiki	6,078	52	1774	2 July, 1908	2,195	"	595	590	..	590 3 10
Waitaha	4,270	52	1160	23 May, 1901	5,362	"	1,341	1,342	..	1,341 10 6
Waitangitaona	726	54	1721	1 July, 1909	320	"	50	..	..	..
Wanganui	1,486	81	3001	12 Oct., 1911	488	"	240	..	..	..
Wataroa	2,847	89	3025	10 Oct., 1907	1,300	"	250	245	..	245 7 2
Totals	40,724	..	..	..	20,574	..	4,576	3,995	125 0 0	4,119 14 4
				CANTERBURY LAND DISTRICT.						
Ruapuna	847	80	1640	8 Nov., 1894	1,270	Road-works	106	75	..	75 0 0
Waimate Reserve No. 1126 ..	626	72	1273	15 Sept., 1892	6,269	"	300	300	..	300 0 0
Waimate Reserve No. 1128 ..	505	72	1273	15 Sept., 1892	7,268	"	25	25	..	25 0 0
Waimate Reserve No. 1178 ..	157	72	1273	15 Sept., 1892	2,193	"	25	25	..	25 0 0
Totals	2,135	..	..	..	17,000	..	456	425	..	425 0 0
				OTAGO LAND DISTRICT.						
Blackstone	22,535	10	233	7 Feb., 1895	24,748	Road-works	500	500	..	500 0 0
Catlin's (Blocks IV, V, VI, VII)	8,580	16	530	23 Feb., 1905	3,828	"	1,057	1,057	..	1,056 17 9
Catlin's, Block II	196	13	246	23 Feb., 1893	196	"	50	50	..	50 0 0
Gimmerburn	8,682	24	481	29 Mar., 1894	6,152	"	1,032	1,032	..	1,032 0 0
Glenomaru, Blocks III, IV, V, VII, IX, X	1,040	95 13	1606 246	8 Dec., 1892 23 Feb., 1893	619	"	179	179	..	179 0 0
Glenomaru, Block VI ..	25	62	1211	10 Aug., 1893	80	"	25	25	..	25 0 0
Lauder-Blackstone	3,809	24	481	29 Mar., 1894	3,608	"	476	476	..	476 0 0
Lauder-Tiger Hill	28,823	24	481	29 Mar., 1894	22,112	"	1,000	1,000	..	1,000 0 0
Lower Wanaka	3,368	34	714	10 May, 1894	1,250	"	101	101	..	101 0 0
Maniototo	277	24	481	29 Mar., 1894	245	"	104	100	..	100 0 0
Maniototo No. 2	6,916	10	233	7 Feb., 1895	5,911	"	907	600	..	600 0 0
Maniototo No. 3	6,295	12	284	14 Feb., 1895	6,001	"	300	300	..	300 0 0
Maruwhenua	49,116	15 23	336 479	18 Feb., 1892 18 Mar., 1892	72,246	"	7,000	7,000	..	7,000 0 0
Naseby, No. 2	2,444	10	234	7 Feb., 1895	2,038	"	313	313	..	313 0 0
Naseby, Maniototo, and Gimmerburn	5,277	79	1774	3 Nov., 1898	3,677	"	910	910	..	910 0 0
Rankleburn, Block VI ..	544	102 13	1744 246	29 Dec., 1892 23 Feb., 1893	194	"	136	136	..	136 0 0
Rimu	1,609	28	740	25 Mar., 1897	525	"	249	..	..	..
Swinburn	1,790	40	656	18 May, 1893	1,610	"	288	288	..	288 0 0
Tahaukupu	2,817	13	245	23 Feb., 1893	2,256	"	675	675	..	675 0 0
Tautuku, Block I	3,850	77	1346	6 Oct., 1892	2,800	"	555	555	..	555 0 0
Tuapeka West, Blocks I, II, III, IV, VII, VIII	2,545	102 102 13	1742 1745 246	29 Dec., 1892 29 Dec., 1892 23 Feb., 1893	1,681	"	367	367	..	367 0 0
Woodlands, Blocks II, V, VI, VIII	13,400	15	336	18 Feb., 1892	11,225	"	4,950	4,950	..	4,950 0 0
Woodlands, Blocks VII, X, XI	1,693	74	1297	22 Sept., 1892	1,384	"	307	307	..	307 0 0
Totals	175,631	..	..	..	174,386	..	21,481	20,921	..	20,920 17 9
				SOUTHLAND LAND DISTRICT.						
Ackers	351	68	1327	7 Sept., 1893	702	Road-works	220	217	..	216 16 3
Alton No. 2	2,722	21	831	22 Mar., 1906	1,269	"	317	317	..	316 19 6
Alton No. 3	8,143	47	1541	10 June, 1909	4,428	"	2,130	2,130	..	2,130 0 0
Alton No. 4	172	92	3713	20 Oct., 1910	333	"	100	12	117 14 5	130 0 8
Aparima No. 1	1,626	35	1322	18 April, 1912	1,472	"	725	..	160 0 0	160 0 0
Campbelltown	2,507	60	2133	4 July, 1912	2,680	"	1,320	..	123 6 7	123 6 7
Carried forward ..	15,521	..	..	..	10,884	..	4,812	2,676	401 1 0	3,077 3 0

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* The figures give the totals to the nearest pound for the year ending 31st March, 1912.

STATEMENT SHOWING THE BLOCKS OF LAND WHICH HAVE BEEN PROCLAIMED UNDER THE NEW ZEALAND STATE-GUARANTEED ADVANCES ACT, 1909, AND AMENDMENTS, ETC.—*continued.*

Name of Block.	Area of Block.	Gazetted.			Surveyor-General's Report.			Expenditure.		
		No.	Page.	Date.	Valuation of Block.	Works required to open up such Block.	Estimated Cost proposed to be borrowed.	To Mar. 31, 1912. *	From April 1, 1912, to March 31, 1913.	Total to March 31, 1913.
SOUTHLAND LAND DISTRICT—*continued.*										
	Acres.				£		£	£	£ s. d.	£ s. d.
Brought forward ..	15,521	..	..	..	10,884	..	4,812	2,676	401 1 0	3,077 3 0
Forest Hill	1,668	57	2181	13 July, 1911	974	Road-works	420	..	162 0 0	162 0 0
Hillend	857	112	2950	21 Dec., 1905	433	"	108	108	..	108 0 0
Hokonui	404	7 39	149 1021	30 Jan., 1896 27 April, 1905	253	"	95	85	..	85 7 10
Hokonui No. 2	1,181	81	2182	7 Sept., 1905	714	"	152	152	..	151 17 2
Invercargill Hundred, Block XXIII	1,403	72	1273	15 Sept., 1892	1,840	"	400	400	..	400 0 0
Lillburn, Monowai, and Alton	30,059	83	1389	20 Oct., 1892	13,299	"	8,000	8,000	..	8,000 0 0
Longwood	2,827	16	529	23 Feb., 1905	1,322	"	330	82	..	81 13 0
Longwood, Blocks XVI and I	5,659	90	1529	11 Nov., 1892	2,830	"	1,400	1,400	..	1,400 0 0
Lora	2,913	73	1884	3 Aug., 1905	1,330	"	332	332	..	331 18 10
Mabel	343	73	1883	3 Aug., 1905	231	"	58	58	..	58 0 0
Mabel No. 1	1,162	85	3447	22 Sept., 1910	567	"	280	216	62 18 8	278 16 10
Mokoreta	7,400	23	411	30 Mar., 1893	3,700	"	492	202	..	201 19 5
Oraki	668	100	3649	7 Dec., 1911	530	"	255	..	0 9 0	0 9 0
Otapiri	616	73	1883	3 Aug., 1905	313	"	78	77	..	77 9 10
Oteramika	6,253	71	1377	21 Sept., 1893	2,006	"	625	281	..	281 3 9
Oteramika No 1	4,635	67	1910	7 July, 1910	3,490	Roads and bridges	1,745	1,172	322 3 2	1,494 10 6
Paterson, Block I	633	23	411	30 Mar., 1893	256	Road-works	158	158	..	158 0 0
Spar Bush	1,364	61	2304	27 July, 1911	1,807	"	770	..	114 1 6	114 1 6
Taunoa	958	100	3648	7 Dec., 1911	426	"	210	..	69 15 4	69 15 4
Waiau (Blocks XIII and XIV, Waiau Survey District)	5,472	83	2221	14 Sept., 1905	2,070	"	732	732	..	732 0 11
Waikawa	6,000	23	412	30 Mar., 1893	3,000	"	1,500	1,500	..	1,500 0 0
Waikawa No. 1	1,194	84	2260	21 Sept., 1905	663	"	331	311	..	311 8 11
Waikawa, Block II	307	90	1901	21 Oct., 1897	643	"	186	186	..	185 19 5
Waikawa-Otara	31,625	23	411	30 Mar., 1893	15,500	"	7,750	7,750	..	7,749 12 5
Waikawa-Otara Extension ..	1,647	67	1919	11 Aug., 1904	664	"	199	194	..	193 12 0
Waimatua	6,131	70	2402	10 Sept., 1908	10,447	"	1,990	1,990	..	1,989 19 9
Winton	2,023	77	2019	24 Aug., 1905	1,515	"	379	379	..	379 0 0
Totals	140,863	..	..	..	81,707	..	33,787	28,441	1,132 8 8	29,573 19 5

SUMMARY.

Name of Block.	Area of Block.	No.	Page.	Date.	Valuation of Block.	Works required to open up such Block.	Estimated Cost proposed to be borrowed.	To Mar. 31, 1912. *	From April 1, 1912, to March 31, 1913.	Total to March 31, 1913.
Auckland Land District ..	1,196,907	..	..	..	785,227	..	243,251	194,192	16,186 7 9	210,375 12 7
Hawke's Bay Land District ..	394,120	..	..	..	555,125	..	90,383	72,358	7,752 5 6	80,111 2 7
Taranaki " ..	644,913	..	..	..	489,979	..	192,215	161,251	6,697 9 3	167,949 16 9
Wellington " ..	749,387	..	..	..	823,988	..	241,050	187,071	16,094 11 5	203,168 17 4
Nelson " ..	412,480	..	..	..	151,943	..	44,005	27,726	2,031 2 2	29,759 3 7
Marlborough " ..	211,571	..	..	..	109,737	..	25,499	22,203	555 13 5	22,758 6 1
Westland " ..	40,724	..	..	..	20,574	..	4,576	3,995	125 0 0	4,119 14 4
Canterbury " ..	2,135	..	..	..	17,000	..	456	425	..	425 0 0
Otago " ..	175,631	..	..	..	174,386	..	21,481	20,921	..	20,920 17 9
Southland " ..	140,863	..	..	..	81,707	..	33,787	28,441	1,132 8 8	29,573 19 5
Totals	3,968,731	..	..	..	3,209,666	..	896,703	718,583	50,574 18 2	769,162 10 5

* The figures give the totals to the nearest pound for the year ending 31st March, 1912.

Department of Lands and Survey,
Wellington, 2nd June, 1913.

JOHN STRAUCHON,
Under-Secretary for Lands.

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1913.
NEW ZEALAND.

DRAINAGE OPERATIONS IN HAURAKI PLAINS:

REPORT FOR THE YEAR ENDED 31ST MARCH, 1913; TOGETHER WITH STATEMENT OF ACCOUNTS.

Presented to both Houses of the General Assembly pursuant to Section 10 of the Hauraki Plains Act, 1908.

Sir,— Department of Lands and Survey, Wellington, 2nd June, 1913.

I have the honour to submit herewith the report on the drainage operations in the Hauraki Plains for the past year, in accordance with the provisions of the Hauraki Plains Act, 1908.

The operations for the past year have been as successful as previously, and the area of land reclaimed and settled now amounts to 30,010 acres, occupied by 199 selectors, the area set apart under the Act for drainage and reclamation purposes being 90,000 acres.

The total expenditure under the Act has now been as follows:—

	£	s.	d.
For the year ended 31st March, 1908	5,070	0	0
„ 1909	11,672	5	6
„ 1910	22,235	2	11
„ 1911	32,103	14	0
„ 1912	40,084	13	1
„ 1913	26,608	1	3
Total	£137,773	16	9

The valuations of 30,347 acres subdivided for settlement and reserves amount to £160,010, and the valuation of the areas it is proposed to open during the present year amount to an additional £17,000.

During November and January I visited and inspected the works in progress and satisfied myself of the continued success of the operations, which are being carried on in a highly efficient and economical manner.

The detailed report of the Land Drainage Engineer (Mr. J. B. Thompson) sets forth the varied nature of the works performed under his supervision, necessitating much technical knowledge and business ability. His staff have continued to assist him with the greatest energy and zeal.

I have, &c.
John Strauchon,
Under-Secretary for Lands.

The Hon. W. F. Massey, Minister of Lands.

Statement of Accounts (as required by Section 10 of the Hauraki Plains Act, 1908) for the Year ended 31st March, 1913.

Receipts.

		£	s.	d.
1st April, 1912.				
To Balance—Cash in Public Account		7,521	10	11
31st March, 1913.				
To Land-sales	£1,245 0 0			
Rents	5,167 19 1			
Miscellaneous	451 16 4			
		6,864	15	5
Advances made by the New Zealand State-guaranteed Advances Office		15,000	0	0
		£29,386	6	4

Expenditure.

	£	s.	d.
31st March, 1913.			
By Expenditure—			
Travelling allowances and expenses, camp allowances, and general expenses of administration	163	3	1
Purchase and equipment of dredges and launches, maintenance, and and working-expenses	3,514	14	11
Buildings, maintenance of..	9	6	9
Drainage-works, clearing channels, building stop-banks, and all expenses incidental thereto	17,551	13	5
Tramways, cost of laying	794	11	8
Compensation for lands acquired	662	0	9
Payments on loans—			
Interest	2,748	15	8
Repayment of principal	1,163	15	0
Balance—Cash in Public Account	2,778	5	1
	£29,386	6	4

Loan Account.

31st March, 1913.	£	s.	d.	1st April, 1912.	£	s.	d.
To Balance	118,941	7	4	By Balance due to Loans to Local Bodies' Account (on original loan of £31,000)	34,729	1	7
				31st March, 1913.			
				Year's interest at 4 per cent. per annum	1,389	3	3
				Advances made by the New Zealand State-guaranteed Advances Office—			
				No. 1 Loan—Balance	4,784	7	6
				No. 2 ,, ,, ...	4,784	7	6
				No. 3 ,, ,, ...	4,821	17	6
				No. 4 ,, ,, ...	9,643	15	0
				No. 5 ,, ,, ...	24,293	15	0
				No. 6 ,, ,, ...	9,790	0	0
				No. 7 ,, ,, ...	9,868	15	0
				No. 8 ,, ,, ...	9,868	15	0
				No. 9 ,, ,, ...	4,967	10	0
	£118,941	7	4		£118,941	7	4

REPORT BY LAND DRAINAGE ENGINEER.

Sir,—

I have the honour, in accordance with the provisions of the Hauraki Plains Act, 1908, to report upon the various operations carried out for the year ending on the 31st March, 1913.

As in previous years, the development and maintenance of the land-drainage system has been actively carried on, and every effort has been made to improve the existing drainage and road works. Naturally, with such a great mileage of this class we have had to carefully allocate available funds, and when the different details hereafter are considered it will be seen that the calls for maintenance are now considerable and ever increasing. As no county rates are paid by settlers on Hauraki Plains, naturally the upkeep of roads is a charge upon special grants and the Hauraki Plains Settlement Account.

During the past year some 2,540 acres of excellent drained country was made available for selection and is now in occupation. The total area now reclaimed and settled is 30,010 acres, and this area is occupied by some 199 selectors. This result may be fairly claimed as being very satisfactory, and represents the transformation of previously useless swamp into what will in the near future be some of the most valuable dairying-land in the district.

Very great strides have been made by the settlers in improving and grassing their holdings, and a considerable amount of cream has been sent away to the factories during the past year. Fortunately these selectors are very enthusiastic and progressive, which is a matter for congratulation, and every reasonable effort is being made to help them.

In each particular work dealt with hereafter, totals are given showing the position the various works have reached as at the 31st March, 1913, and details of all classes of work executed during the year are shown separately under the heading of "Works performed."

Priestman Dredges.

Both dredger No. 1 and dredger No. 2 have been actively engaged during the past year in connection with the improvement of the Piako River, a total of 140,262 cubic yards of alluvial clay being excavated and deposited on the river-banks during the year, at an average cost of 3·05d. per cubic yard. This cost includes every charge against wages, supplies, repairs, idle time, holidays, and maintenance.

The dredges operated on the widening of some 4¼ miles of the Piako River between the Awaiti Stream and the Waikaka Canal. Between these points there was great restriction of the river cross-section, and this has been increased in width by an average of 20 ft. throughout. The flood-waters will now readily discharge instead of being "banked up" as in the past. The Awaiti Stream was also dredged and widened for some 10 chains.

It may be mentioned that considerable trouble was experienced in dealing with the many willow-trees met with *en route*.

The spoil excavated will in the future serve for stop-banks when developing the area in the locality. Our dredgemasters have, as in the past, evinced great interest in their work, which has been excellent and, moreover, economical.

Waitakaruru–Maukoro Canal.

No work has been done on this canal by dredgers during the past year, as they were required for urgent work on the Piako River. However, the policy of stripping the peat for full width of 42 ft. by 5 ft. in depth has been prosecuted, and a length of 75 chains has been executed during the year. Trouble is experienced in carrying out this work throughout the year, as in midwinter the men cannot work up to their waists in "slurry" because of the cold, and in summer there is a scarcity of water for sluicing purposes.

To date some 189 chains of the canal is dredged, while the stripping ahead of dredging is now 85 chains. The stripping has exposed a heavy layer of timber throughout, and some of this has been "shot" out. Considerably less depth of peat has been found at the end of stripping than the original soundings taken some eight years ago roughly indicated.

WAIKAKA CANAL.

During the year an opportunity was taken while the river was low to deepen with dredger No. 2 the northern end of this canal. All traffic is now carried by this waterway, but some further little improvement will be made later on. The length of completed canal is 65 chains.

PIAKO RIVER IMPROVEMENTS.

The works detailed against "Priestman dredges" practically covers this heading. A special grant of £2,000 per annum for two years has been obtained for this work, out of which an amount of £465 0s. 9d. has been expended for dredging, covering some four months of the past year, the cost of the remaining eight months' dredging, &c., being a charge against the Hauraki Plains Settlement Account. It is intended to make substantial improvements in addition to the present widening of the river, and some bad bends will be cut through to ease the river in flood-time. The work is very necessary owing to the extra amount of water being discharged into the Piako River through the active operations of the various Drainage Boards up-country.

As mentioned before, some 4¼ miles of river has been greatly improved by widening, but it will require some four months' work yet to complete the stretch. The fact of access roads from foothills trending towards the river makes the matter doubly important, as the dangers of navigation to different wharves during winter months will be greatly abated.

STOP-BANKS.

The present total length of stop-banks (or levees) completed to date is 27 miles 42 chains. No new banks were built during the year.

Considering everything, these stop-banks have stood remarkably well, and they are becoming quite consolidated. Where the country is "green" constant attention is paid to stop-banks, and they are maintained and improved from time to time. Close flax-planting at base of banks has proved very effectual in preventing erosion, and grass-seed is sown as required, and both will be continued in the future.

FORMED ROADS.

The total length of formed cart-roads—*i.e.*, drains on both sides of roads, along with formation—is now 50 miles 28 chains, of which amount 5 miles 43 chains was converted from road-bank tracks during the past year, and some 5 miles 49 chains being new construction.

Drays and scoops have been utilized in blinding with sand some 4 miles 29 chains of peaty road formation, this being included in totals. Some 10,000 cubic yards of sand was used for blinding.

The time is rapidly approaching when the question of metalling a considerable length of the clay roads will be urgent.

ROAD-BANKS.

The total length of road-banks—*i.e.*, spoil from road-drains removed about 4 ft. from edge thereof and spread—is 13 miles. These banks are from time to time converted into formed roads, and are necessarily a fluctuating quantity.

DRAINS IN OPERATION.

The total mileage of drains in operation is now 276 miles, and includes stop-bank drains, road-drains, subdivisional drains, service-drains, and outfalls of all descriptions. This is an increase of 18½ miles during the past year.

At Waikaka and Waitakaruru very heavy work was experienced in deepening and widening several miles of old drains in the peat country. These old drains were practically closed up: the length so deepened and widened is given under the heading of "Works performed."

WAITOA AND PIAKO RIVERS: SNAGGING.

The Waitoa River has now been snagged for some 15 miles 75 chains, the length covered during the past year being 6 miles 45 chains. All this has been done with a special plant located on a floating pontoon. This work will shortly stop for the season, and be taken up again per medium of bullock-teams "snigging," as the banks are now too high to economically work the barge.

The total length of Piako River upper reaches now snagged is 8 miles 25 chains, the length covered this year being 1 mile. It will be advantageous to do about 2 miles more on this river.

Both these works have been done out of special grants.

WHARVES.

The total number of wharves now in position is fourteen, three of these being erected during the past year, and one purchased.

Extensions were made to two of the above wharves, and also six low-water stages added to same. Alterations are about to be made to the lately acquired Waikaka jetty, and a breastwork will be built at the south end of the Puhanga spillway.

FLOOD-GATES.

The total number of gates now in position is fifty-seven, some five gates having been erected during the year. The simple type of gate is still being put in. All these gates will require to be renewed from time to time in reinforced concrete as circumstances warrant. At the outlets of flood-gates some twelve flumings have been laid down. Improvements, &c., have been made to flood-gates as required, and all are now in very fair order.

BRIDGES, CULVERTS, ETC.

The total number of sill bridges to date is ninety; small bridges on piles, eight; one two-span bridge; and culverts, four.

PRIVATE TELEPHONE-LINE TO WORKS.

This line of 14 miles has now a considerable amount of work on it, as, in addition to our own, it carries wires of the Post and Telegraph Department. The private wire as been maintained as found necessary.

BUILDINGS.

The total number of buildings on works comprises thirty-seven of all classes, and they used as workmen's quarters, wharf-stores, &c. Of this number four wharf-stores were built during the year. All are in very fair order.

FLOATING PLANT.

This consists of the following: Two Priestman grab dredgers complete, one steamer, four oil-launches, three pontoons, and sundry small punts. All are kept in good repair.

ARTESIAN BORING PLANT.

To date some fifty-nine bores have been sunk for settlers and the works. Of this number twenty-eight were sunk during the year, one of these being situated on the pound-site, the balance being for settlers. Flows have ranged from 3,000 gallons to 100,000 gallons per diem.

The water still continues to be mineralized, but seems to suit stock very well indeed. Schedules of twenty-eight bores are attached hereto, and are of interest geologically.

The bores are being sunk for settlers on easy terms extending over periods that suit them. Repayments to date total £210 16s. 8d., of which amount £179 17s. 9d. was received during the year under review. All outstanding amounts will be collected in due course, so that no loss will accrue to the account. Only one plant is used on the works, and the value of bores sunk during the year is £646 18s. 6d.

LIGHT TRAM-LINE.

Owing to the strikes on the Continent the oil locomotive only arrived quite lately, and as the season was late the line to be laid down for purposes of carrying spoil to ballast peat roads was not proceeded with. Instead of this the rails and sleepers are to be used in connection with transport of road metal on Pipiroa–Waitakaruru Road.

WORKS PERFORMED DURING YEAR.

The following works have been executed under piecework conditions: Double drain and road-bank, 2 miles 18 chains; double drain and road formation, 1 mile 56 chains; widening road-drains and spreading spoil, 11 miles 48 chains; new drain and road formation, 25 chains; clearing scrub and stumping roads, 2 miles 23 chains; converting road-banks into roads, 1 mile 14 chains; cleaning road-drains, 34 miles 48 chains; new outlet drains, 4 miles 61 chains; deepening outlet drains, 8 miles 18 chains; cleaning outlet drain, 9 miles 60 chains; new subdivisional drains, 56 chains; deepening subdivisional drains, 4 miles 56 chains; cleaning subdivisional drains, 3 miles 16 chains; new stop-bank drains, 1 mile 33 chains; deepening stop-bank drains, 51 chains; cleaning stop-bank drains, 22 chains; stripping peat, Waitakaruru Canal, 75 chains; snagging Piako River (upper reaches), 1 mile; removing heavy timber from drains, 3 miles 75 chains; fencing, 36 chains: distance covered, 93 miles 61 chains.

The following works have been executed by day labour: Blinding peat roads with sand (10,000 yards, approximate), 4 miles 29 chains; road formation, 3 miles 73 chains; new road-drains, 1 mile 17 chains; deepening road-drains, 4 miles 20 chains; cleaning road-drains, 23 miles 41 chains; clearing road-lines of scrub, and stumping, 3 miles 44 chains; new outlet drains, 1 mile 20 chains; deepening outlet drains, 66 chains; cleaning outlet drains, 3 miles 64 chains; strengthening stop-banks, 7 miles 11 chains; cleaning stop-bank drains, 4 miles 55 chains; new stop-bank drains, 1 mile 1 chain; timbering road-drain, 20 chains; discing and rolling roads, 13 miles; snagging Waitoa River, 6 miles 45 chains: distance covered, 79 miles 26 chains. Construction of—wharves, 3; flood-gates, 5; bridges, 19; flumings to gates, 12; sheds, 4. Artesian bores sunk, 28. Posts, 700. Poles, 300. Fascines, 1,500. Spoil removed by dredgers, 140,262 cubic yards.

Many other services of a maintenance nature have been done by day labour. A daily average of about 175 men have been employed on piecework contracts and day labour throughout the year. Day labour has again proved quite satisfactory.

Settlers on Hauraki Plains always have a preference both as regards piecework and day labour, and have done a lot of work during this past year.

CATTLE.

At the beginning of the financial year there were some sixty-nine head of Government stock on the ground standing a cost to the account of £88 9s. 6d., after allowing for the sales of last year. Of this number there has now been sold by auction, &c., some forty-five head, giving a net return of £193 9s. 3d. The balance of stock are still on the ground, but some of the number will be written off on account of deaths, &c., after mustering. When it is considered that the stock were depasturing only on rough drained country the result may be considered satisfactory.

GRASS-SEED FOR SETTLERS.

As mentioned in last annual report, the matter of assisting the settlers to procure grass-seed to replace losses on account of ravages of crickets was to receive attention. Some fourteen settlers obtained seed-supplies at a cost of £276 7s. 5d., which amount was paid to sundry merchants by the Department, who in turn received promissory notes for the various amounts from the several settlers, and these debts are being met as they become due or are repaid upon any transfer of sections taking place.

FLAX AREAS.

The only flax area dealt with is situated at Waikaka, a sum of £58 3s. being realized on account of royalty for green flax. If flax keeps up in value there will be a fair quantity of green flax to dispose of in the locality of Waitakaruru.

METALLING OF ROADS.

During last financial year a special grant of £3,500 was obtained for this purpose, and tenders were twice called for various lengths of road. However, only one contract was let for supply and spreading of metal on Turua Road, at a cost of £1,002 7s. 6d., and this is well under way. All other tenders were exorbitant, and it was decided to obtain quotes for supply only. One contract was thus let for the supply of 2,500 cubic yards of gravel at a total cost of £1,062 10s. delivered at Pipiroa Wharf. This metal is being spread by the Department's own day labour, a light tram-line and trucks being used. The cost will very closely approximate our original estimate. Owing to the lateness of the season, it was decided not to put in hand any further work at present, but to do so in the spring.

It will be necessary to obtain some further steel rails and trucks for the coming season, as it is very apparent that metalling can be done much cheaper by the Department than by contract. In addition to the various roads earmarked for metalling last year, it is suggested that some metalling should be done on the various roads leading from the Piako River both east and west, and also that a further length of Pipiroa–Waitakaruru and Kopuarahi–Turua Roads should be metalled, these latter being important through roads.

SURVEYS.

During the year some 2,556 acres was surveyed into sections at Waikaka and Kerepeehi, for settlement and other purposes. Some of this was, however, recast, as the progress of drainage made it possible to cut the sections smaller.

Surveys of some Native lands had also to be undertaken on account of boundaries affecting us. The survey of further areas is now in hand.

VALUATIONS.

Up to date actual valuations have been made of some 30,347 acres that has been subdivided into rural farms, town and suburban sections, and sundry reserves, amounting in the aggregate to £160,010. No valuations of the areas it is intended to bring out during the coming year have as yet been made, but should approximate £17,000, judging from the position disclosed by present state of drainage locally.

WORKS EXPENDITURE DURING YEAR.

Piecework contracts absorbed the sums of £7,121 0s. 7d. from the Hauraki Plains Settlement Account and £462 5s. from special grants. Day labour absorbed a sum of £7,955 from the Hauraki Plains Settlement Account and £2,453 from special grants. All the above were paid from local imprest.

PRINCIPAL WORKS PROPOSED.

The principal works to be carried out during the current financial year are as follows :—

(1.) Improvements to Piako River.
(2.) Continuance of cart-road formation.
(3.) General drainage development of new areas for settlement and opening for selection of same.
(4.) Prosecution of metalling of roads.
(5.) Maintenance and improvements of general works.
(6.) Survey of new areas.

LAND FOR TOWNSHIP AND VILLAGE SITES.

Arrangements have been made to purchase an area of 175 acres at Kerepeehi, and 25 acres at Waikaka, for above purposes, and in due course the land will be suitably subdivided.

LAND PROPOSED TO BE OPENED.

It is anticipated that some 2,000 acres of land at Waikaka will be available for selection towards the end of July, and that some months later a further 2,000 acres in the neighbourhood of Torehape and Waitakaruru will be sufficiently developed to permit of opening. The above land is all of good quality.

It may be mentioned that during the current year an area of probably 6,000 acres of Crown lands, consisting of swamp and hill country adjoining the Hauraki Plains and in the locality of Waitakaruru, will be ready for selection. This block will have the advantage of being roaded, this work now being in progress.

OFFICE.

Both office and drafting staffs have been kept very busy during the year, and a very considerable number of engineering surveys have also been done.

GENERAL.

The attached plan shows the position of operations as at end of financial year, and it will be noticed that a large scope of country is being dealt with. No effort is being spared to bring as much swamp land as possible into profitable use, and thus give effect to the Government's policy.

My thanks are due to the Assistant Land Drainage Engineer, Mr. R. G. Macmorran, and all other members of the local staff, who have worked hard to ensure the success of all operations of office and field.

I have, &c.,
J. B. THOMPSON,
Land Drainage Engineer.

The Under-Secretary, Department of Lands and Survey.

ARTESIAN BORE NO. 32: SECTION 2, BLOCK XI, THAMES. (MR. FLYNN.)

Depth in Ft.	Details.	Depth in Ft.	Details.
79	79 ft. clay.	254	20 ft. pumice sand.
81	2 ft. sand.	258	4 ft. shingle.
94	13 ft. clay.	284	26 ft. pumice sand.
109	15 ft. sandy clay.	286	2 ft. rotten timber.
112	3 ft. pumice.	290	4 ft. sandy clay.
116	4 ft. rotten wood.	292	2 ft. rotten timber.
122	6 ft. pumice.	295	3 ft. clay.
125	3 ft. rotten timber.	299	4 ft. pumice sand.
130	5 ft. pumice sand.	300	1 ft. rotten timber.
140	10 ft. sandy clay.	320	20 ft. pumice sand.
143	3 ft. hard sand.	336	16 ft. hard sand.
151	8 ft. sandy clay.	342	6 ft. sandy clay.
155	4 ft. white clay.	345	3 ft. pumice sand.
158	3 ft. clay.	347	2 ft. clay.
164	6 ft. rotten timber.	354	7 ft. pumice sand.
168	4 ft. sand.	357	3 ft. clay.
205	37 ft. pumice sand.	375	18 ft. pumice sand.
215	10 ft. drift sand.	381	6 ft. clay.
218	3 ft. rotten timber.	441	60 ft. pumice sand.
228	10 ft. drift sand.	487	46 ft. sandy clay.
234	6 ft. clay.		

Total depth, 487 ft. Flow, 17,280 gallons per twenty-four hours.

ARTESIAN BORE NO. 33: SECTION 9, BLOCK XI, THAMES. (MR. W. E. HALE.)

Depth in Ft.	Details.	Depth in Ft.	Details.
125	125 ft. clay.	272	2 ft. rotten timber.
140	15 ft. sandy clay.	292	20 ft. drift sand.
144	4 ft. hard sand.	294	2 ft. shingle.
152	8 ft. sandy clay.	300	6 ft. drift sand.
156	4 ft. white clay.	305	5 ft. clay.
158	2 ft. hard stone.	310	5 ft. pumice sand.
169	11 ft. clay.	314	4 ft. rotten wood.
171	2 ft. rotten timber.	319	5 ft. sandy clay.
176	5 ft. pumice sand.	322	3 ft. rotten wood.
186	10 ft. rotten timber.	357	35 ft. hard stone.
207	26 ft. pumice sand.	369	12 ft. sandy clay.
209	2 ft. rotten timber.	370	1 ft. rotten wood.
229	20 ft. pumice sand.	389	19 ft. pumice sand.
237	8 ft. drift sand.	390	11 ft. rotten wood.
242	5 ft. rotten timber.	393	3 ft. pumice sand.
255	13 ft. pumice sand.	410	17 ft. sandy clay.
259	4 ft. clay.	466	56 ft. hard sand.
270	11 ft. pumice sand.		

Total depth, 466 ft. Flow, nil.

ARTESIAN BORE NO. 34: SECTION 11, BLOCK XI, THAMES. (MR. CLEVELY.)

Depth in Ft.	Details.	Depth in Ft.	Details.
95	95 ft. clay.	232	4 ft. rotten timber.
103	8 ft. sand.	236	4 ft. pumice sand.
100	7 ft. clay.	237	1 ft. rotten timber.
121	11 ft. sandstone.	240	4 ft. pumice sand.
132	11 ft. clay.	254	13 ft. white clay.
140	8 ft. hard sand.	262	8 ft. pumice sand.
163	23 ft. pumice sand.	266	4 ft. clay.
169	6 ft. rotten timber.	276	10 ft. pumice sand.
178	9 ft. drift sand.	278	2 ft. shingle.
196	18 ft. pumice sand.	280	2 ft. clay.
197	1 ft. rotten timber.	332	52 ft. pumice sand.
210	13 ft. pumice sand.	337	5 ft. rotten timber.
213	3 ft. rotten timber.	405	68 ft. pumice sand.
216	3 ft. white clay.	409	4 ft. rotten timber.
228	12 ft. pumice sand.	440	31 ft. clay.

Total depth, 440 ft. Flow, 17,260 gallons per day.

Artesian Bore No. 35: Section 4, Block XI, Thames. (Mr. C. A. Rau.)

Depth in Ft.	Details.	Depth in Ft.	Details.
48	48 ft. clay.	247	3 ft. rotten timber.
63	15 ft. rotten timber.	285	38 ft. pumice sand.
79	16 ft. clay.	299	14 ft. rotten timber.
99	20 ft. pumice sand.	307	8 ft. clay.
119	10 ft. rotten timber.	319	12 ft. pumice sand.
123	4 ft. pumice sand.	321	2 ft. rotten timber.
147	24 ft. clay.	408	87 ft. pumice sand.
149	2 ft. rotten timber.	418	10 ft. rotten timber.
159	10 ft. sandy clay.	436	28 ft. pumice sand.
164	5 ft. rotten timber.	441	5 ft. rotten timber.
168	4 ft. sandy clay.	449	8 ft. pumice sand.
185	17 ft. hard sand.	464	15 ft. white clay.
204	19 ft. sandy clay.	470	6 ft. pumice sand.
207	3 ft. pumice sand.	478	8 ft. clay.
214	7 ft. white clay.	488	10 ft. sandstone.
234	20 ft. rotten timber.	496	8 ft. rotten timber.
244	10 ft. pumice sand.	556	60 ft. sandy clay.

Total depth, 556 ft. Flow, 34,560 gallons per day.

Artesian Bore No. 36: Sections 5 and 6, Block XI, Thames. (Messrs. H. Grundy and F. J. Christie.)

Depth in Ft.	Details.	Depth in Ft.	Details.
43	43 ft. clay.	270	16 ft. hard sand.
53	10 ft. rotten timber.	278	8 ft. rotten timber.
82	29 ft. clay.	310	32 ft. sandy clay.
97	15 ft. rotten timber.	319	9 ft. rotten timber.
107	10 ft. clay.	326	7 ft. pumice sand.
128	21 ft. sandy clay.	330	4 ft. rotten timber.
140	12 ft. rotten timber.	360	30 ft. pumice sand.
156	16 ft. hard sand.	371	11 ft. rotten timber.
192	36 ft. sandy clay.	379	8 ft. clay.
197	5 ft. hard sand.	392	13 ft. sandstone
227	30 ft. shingle.	393	1 ft. shingle.
235	8 ft. rotten timber.	433	40 ft. pumice sand.
242	7 ft. pumice sand.	436	3 ft. clay.
246	4 ft. rotten timber.	440	4 ft. rotten timber.
252	6 ft. pumice sand.	452	12 ft. pumice sand.
254	2 ft. rotten timber.		

Total depth, 452 ft. Flow, 4,800 gallons per hour.

Artesian Bore No. 37: Sections 7 and 8, Block XI, Thames. (Messrs. Peat and Wilson.)

Depth in Ft.	Details.	Depth in Ft.	Details.
49	49 ft. clay.	260	18 ft. pumice sand.
70	21 ft. rotten timber.	264	4 ft. rotten timber.
95	25 ft. clay.	272	8 ft. pumice sand.
115	20 ft. pumice sand.	274	2 ft. rotten timber.
160	45 ft. drift sand.	319	45 ft. pumice sand.
172	12 ft. shingle.	324	5 ft. rotten timber.
175	3 ft. rotten timber.	370	46 ft. pumice sand.
182	7 ft. pumice sand.	372	2 ft. clay.
184	2 ft. rotten timber.	374	2 ft. pumice sand.
197	13 ft. pumice sand.	380	6 ft. rotten timber.
199	2 ft. rotten timber.	389	9 ft. pumice sand.
214	15 ft. clay.	394	5 ft. rotten timber.
216	2 ft. rotten timber.	438	44 ft. pumice sand.
227	11 ft. pumice sand.	466	28 ft. drift sand.
242	15 ft. clay.		

Total depth, 466 ft. Flow, 11,520 gallons per twenty-four hours.

Artesian Bore No. 38: Section 37, Block X, Thames. (Mr. Schwarz.)

Depth in Ft.	Details.	Depth in Ft.	Details.
48	48 ft. clay.	166	2 ft. rotten timber.
70	22 ft. pumice sand.	179	13 ft. pumice sand.
73	3 ft. rotten timber.	184	5 ft. rotten timber.
87	14 ft. pumice sand.	214	30 ft. pumice sand.
89	2 ft. rotten timber.	217	3 ft. rotten timber.
117	28 ft. pumice sand.	227	10 ft. pumice sand.
121	4 ft. clay.	245	18 ft. white clay.
149	28 ft. drift sand.	253	8 ft. sand.
156	7 ft. shingle.	258	5 ft. rotten timber.
164	8 ft. pumice sand.	273	15 ft. pumice sand.

Total depth, 273 ft. Flow, 160 gallons per hour.

ARTESIAN BORE No. 39: SECTION 32, BLOCK X, THAMES. (MR. W. J. ABBOTT.)

Depth in Ft.	Details.	Depth in Ft.	Details.
53	53 ft. clay.	225	4 ft. rotten timber.
80	27 ft. hard sand.	237	12 ft. pumice sand.
93	13 ft. rotten timber.	239	2 ft. rotten timber.
101	8 ft. sand.	253	14 ft. pumice sand.
104	3 ft. clay.	261	8 ft. rotten timber.
128	24 ft. drift sand.	280	19 ft. pumice sand.
131	3 ft. rotten timber.	282	2 ft. clay.
134	3 ft. sand.	286	4 ft. pumice sand.
137	3 ft. rotten timber.	289	3 ft. rotten timber.
142	5 ft. pumice sand.	297	8 ft. pumice sand.
145	3 ft. rotten timber.	301	4 ft. rotten timber.
152	7 ft. clay.	342	41 ft. pumice sand.
156	4 ft. rotten timber.	345	3 ft. rotten timber.
164	8 ft. sandy clay.	356	11 ft. pumice sand.
166	2 ft. rotten timber.	358	2 ft. rotten timber.
174	8 ft. pumice sand.	364	6 ft. pumice sand.
177	3 ft. rotten timber.	365	1 ft. rotten timber.
221	44 ft. pumice sand.		

Total depth, 365 ft. Flow, 180 gallons per hour.

ARTESIAN BORE No. 40: SECTION 33, BLOCK X, THAMES. (MR. T. PRENDERGAST.)

Depth in Ft.	Details.	Depth in Ft.	Details.
54	54 ft. clay.	229	3 ft. rotten timber.
58	4 ft. rotten timber.	237	8 ft. pumice sand.
64	6 ft. hard stone.	239	2 ft. rotten timber.
66	2 ft. clay.	254	15 ft. pumice sand.
87	21 ft. black sand.	255	1 ft. rotten timber.
94	7 ft. rotten timber.	267	12 ft. pumice sand.
117	23 ft. pumice sand.	272	5 ft. rotten timber.
119	2 ft. shingle.	311	39 ft. pumice sand.
132	13 ft. pumice sand.	318	7 ft. sandy clay.
136	4 ft. rotten timber.	323	5 ft. pumice sand.
158	22 ft. pumice sand.	326	3 ft. rotten timber.
167	9 ft. clay.	338	12 ft. pumice sand.
169	2 ft. rotten timber.	340	2 ft. white clay.
181	12 ft. clay.	356	16 ft. pumice sand.
188	7 ft. pumice sand.	359	3 ft. clay.
189	1 ft. rotten timber.	362	3 ft. pumice sand.
201	12 ft. pumice sand.	370	8 ft. rotten timber.
203	2 ft. shingle.	425	55 ft. sandy clay.
226	23 ft. pumice sand.		

Total depth, 425 ft. Flow, 160 gallons per hour.

ARTESIAN BORE No. 41: SECTION 36, BLOCK X, THAMES. (MR. CLEAVER.)

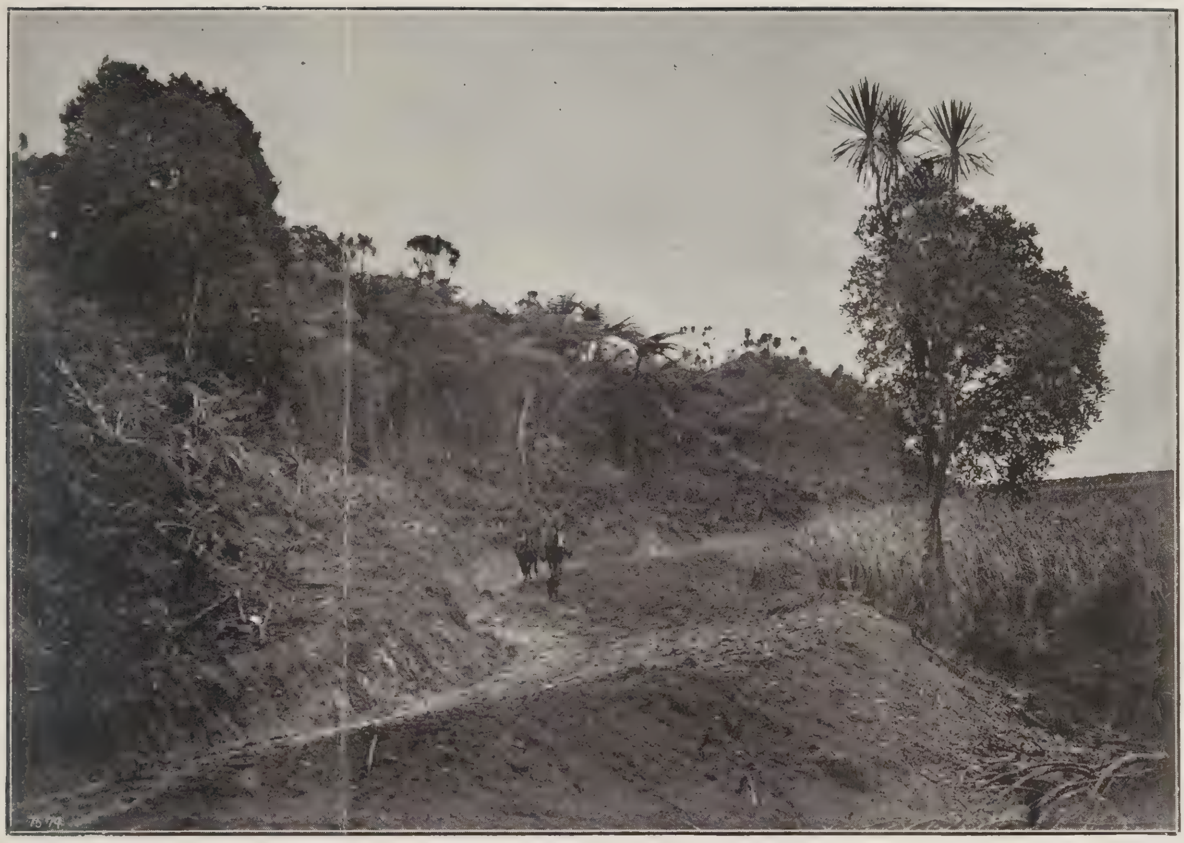
Depth in Ft.	Details.	Depth in Ft.	Details.
49	49 ft. clay.	148	10 ft. shingle.
59	10 ft. drift sand.	176	28 ft. pumice sand.
69	10 ft. pumice sand.	178	2 ft. rotten timber.
98	29 ft. drift sand.	182	4 ft. pumice sand.
108	10 ft. shingle.	189	7 ft. white clay.
138	30 ft. pumice sand.	234	45 ft. pumice sand.

Total depth, 234 ft. Flow, 160 gallons per hour.

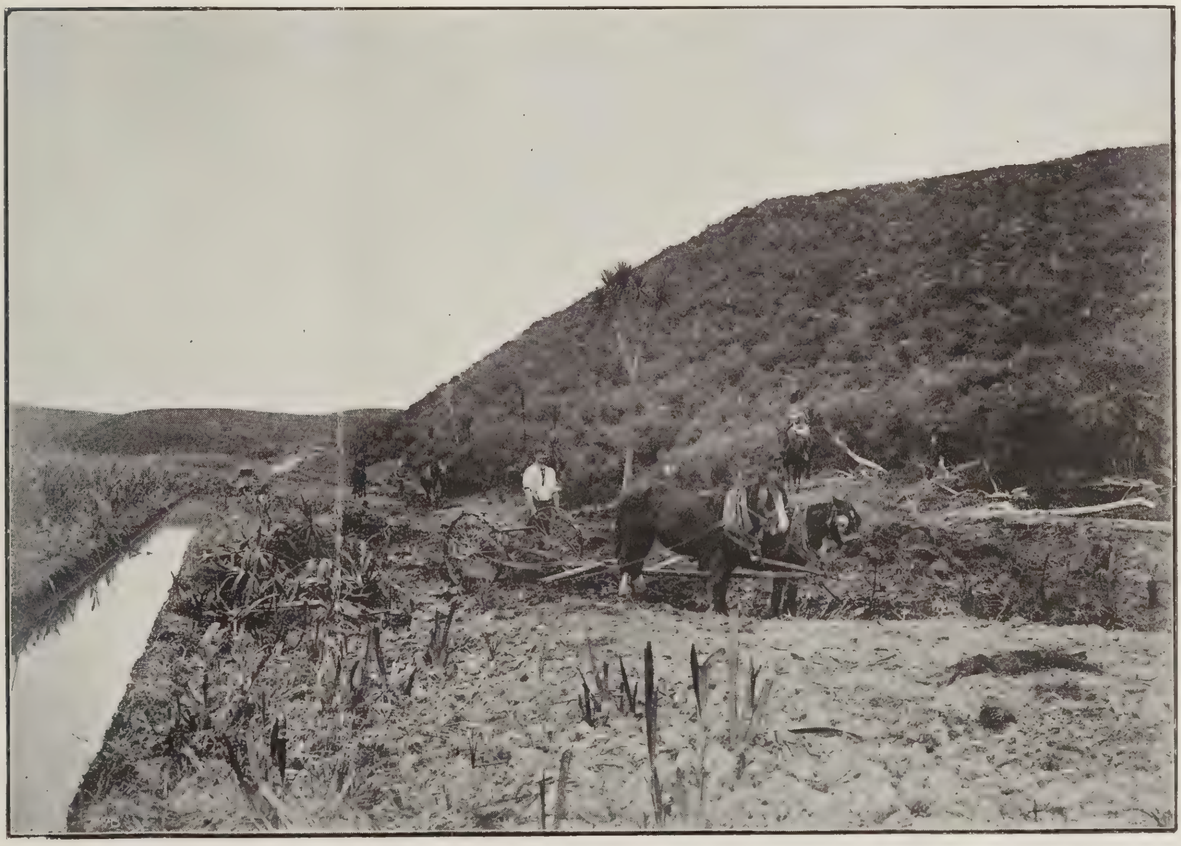
ARTESIAN BORE No. 42: POUND RESERVE AT PIPIROA TOWNSHIP.

Depth in Ft.	Details.	Depth in Ft.	Details.
64	64 ft. clay.	181	4 ft. clay.
97	33 ft. drift sand.	216	35 ft. pumice sand.
102	5 ft. shingle.	235	19 ft. shingle.
107	5 ft. rotten timber.	238	3 ft. rotten timber.
123	16 ft. pumice sand.	261	23 ft. white clay.
128	5 ft. rotten timber.	283	22 ft. blue clay.
148	20 ft. pumice sand.	287	4 ft. rock.
151	3 ft. rotten timber.	290	3 ft. sand.
177	26 ft. pumice sand.	335	45 ft. white clay.

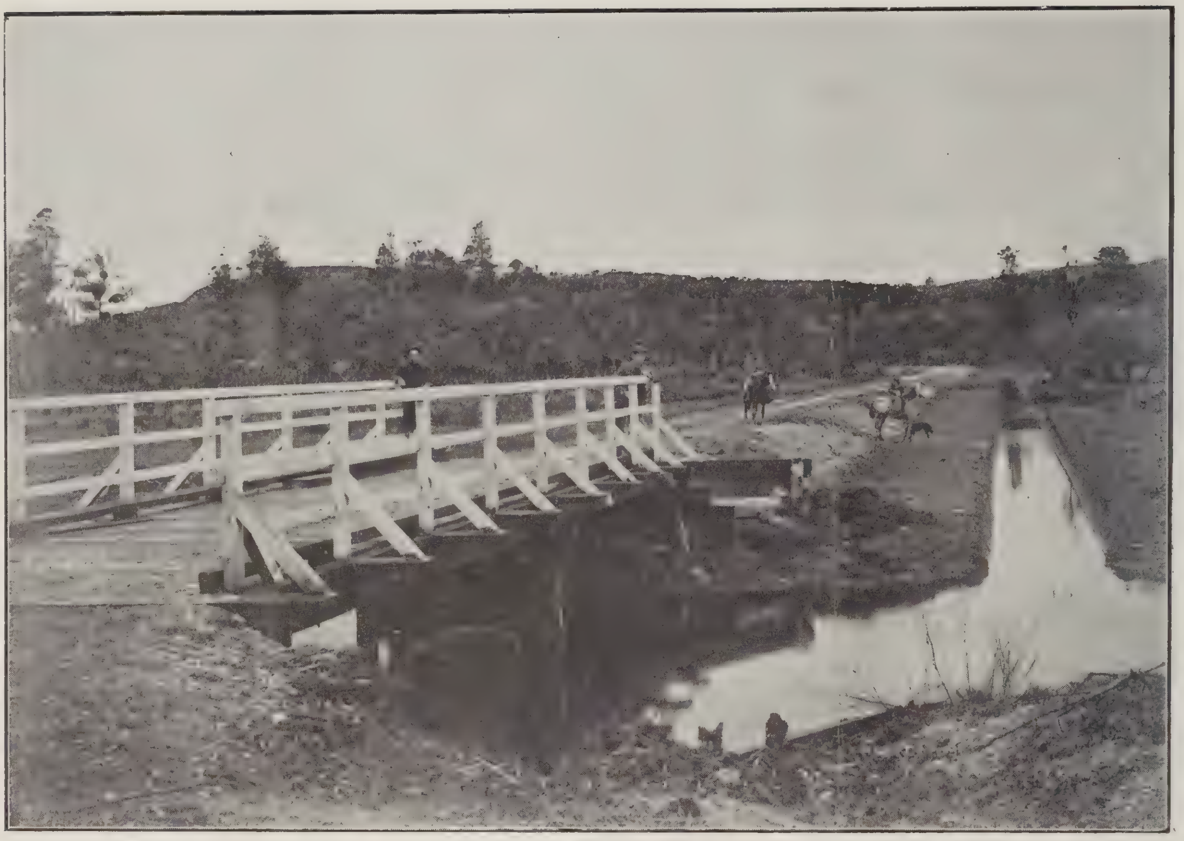
Total depth, 335 ft. Flow, 3,840 gallons per day.



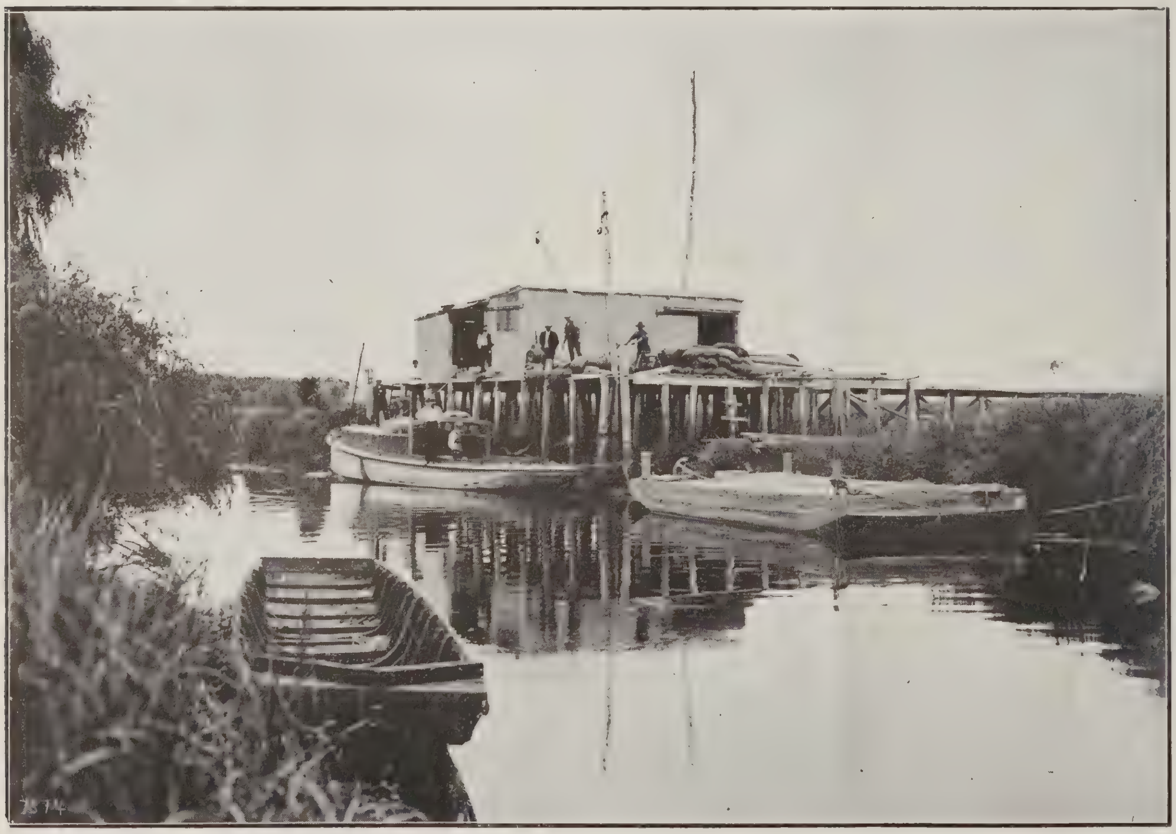
Mahuta Road through Crown Block, on Western Side of Hauraki Plains.



Mahuta Road under Construction, from Edge of Swamp to Foothills.



Waitakaruru Stream Bridge and Commencement of Mahuta Road into Crown Block.



Wharf at Waikaka, Piako River.

Northern Steamship Company's "Victory" on Piako River *en route* to Auckland.

Oats growing on Virgin Land at Waikaka.

ARTESIAN BORE NO. 43: SECTIONS 8 AND 10, BLOCK X, THAMES. (MESSRS. KNAPP AND KEANE.)

Depth in Ft.	Details.
104	104 ft. clay.
111	7 ft. sand.
121	10 ft. clay.
124	3 ft. sand.
134	10 ft. white clay.
139	5 ft. drift sand.
146	7 ft. white clay.
155	9 ft. pumice sand.
180	25 ft. drift sand.
204	24 ft. shingle.
210	6 ft. drift sand.
215	5 ft. clay.
219	4 ft. rotten timber.
246	27 ft. blue clay.
266	20 ft. white clay.
271	5 ft. rotten timber.
331	60 ft. sandy clay.

Total depth, 331 ft. Flow, 5,760 gallons per day.

ARTESIAN BORE NO. 44: SECTION 1, BLOCK X, WHAREKAWA. (MESSRS. HARRIS BROS.)

Depth in Ft.	Details.
64	64 ft. clay.
79	15 ft. pumice sand.
89	10 ft. clay.
101	12 ft. pumice sand.
109	8 ft. rotten timber.
113	4 ft. sand.
115	2 ft. rotten timber.
127	12 ft. sandy clay.
129	2 ft. rotten timber.
151	22 ft. pumice sand.

Total depth, 151 ft. Flow, nil.

ARTESIAN BORE NO. 45: SECTION 26, BLOCK X, THAMES. (MR. F. H. BROCKLEHURST.)

Depth in Ft.	Details.
67	67 ft. clay.
83	16 ft. pumice sand.
88	5 ft. clay.
100	12 ft. pumice sand.
103	3 ft. clay.
111	8 ft. pumice sand.
121	10 ft. clay.
128	7 ft. drift sand.
139	11 ft. white clay.
147	8 ft. pumice sand.
180	33 ft. blue clay.
182	2 ft. drift sand.
184	2 ft. clay.
187	3 ft. drift sand.
200	13 ft. rotten timber.
208	8 ft. pumice sand.
215	7 ft. rotten timber.
235	20 ft. pumice sand.
239	4 ft. rotten timber.
255	16 ft. pumice sand.
260	5 ft. drift sand.

Total depth, 260 ft. Flow, 17,280 gallons per day.

ARTESIAN BORE NO. 46: SECTION 24, BLOCK X, THAMES. (MR. C. WAITE.)

Depth in Ft.	Details.
64	64 ft. clay.
156	92 ft. pumice sand.
181	25 ft. white clay.
186	5 ft. sand.
194	8 ft. clay.
198	4 ft. sand.
206	8 ft. rotten timber.
210	4 ft. clay.
214	4 ft. rotten timber.
220	6 ft. sand.
222	2 ft. rotten timber.
225	3 ft. sand.
227	2 ft. rotten timber.
249	22 ft. drift sand.
258	9 ft. rotten timber.
263	5 ft. sand.
268	5 ft. rotten timber.
280	12 ft. sandstone.
285	5 ft. clay.
289	4 ft. sand.
317	28 ft. blue clay.
320	3 ft. pumice sand.
328	8 ft. clay.
335	7 ft. pumice sand.
341	6 ft. clay.
346	5 ft. pumice sand.
348	2 ft. rock.
352	4 ft. clay.

Total depth, 352 ft. Flow, 5,760 gallons per day.

ARTESIAN BORE NO. 47: SECTION 23, BLOCK X, THAMES. (MESSRS. SIMPSON BROS.)

Depth in Ft.	Details.
70	70 ft. clay.
102	32 ft. drift sand.
105	3 ft. clay.
108	3 ft. pumice sand.
109	1 ft. clay.
124	15 ft. drift sand.
129	5 ft. rotten timber.
137	8 ft. clay.
140	3 ft. pumice sand.
170	30 ft. white clay.
175	5 ft. sand.
200	25 ft. blue clay.
218	18 ft. rotten timber.
222	4 ft. pumice sand.
224	2 ft. rotten timber.
285	61 ft. drift sand.
287	2 ft. rotten timber.
296	9 ft. pumice sand.
300	4 ft. shingle.
341	41 ft. clay.
363	22 ft. black sand.

Total depth, 363 ft. Flow, 7,200 gallons per day.

ARTESIAN BORE No. 48: SECTION 21, BLOCK X, THAMES. (MR. S. S. MURRAY.)

Depth in Ft.	Details.	Depth in Ft.	Details.
73	73 ft. clay.	158	18 ft. drift sand.
75	2 ft. rotten timber.	166	8 ft. shingle.
102	27 ft. pumice sand.	254	88 ft. clay.
106	4 ft. clay.	257	3 ft. sand.
118	12 ft. pumice sand.	260	3 ft. rotten timber.
122	4 ft. clay.	261	1 ft. sand.
130	8 ft. pumice sand.	265	4 ft. clay.
138	8 ft. clay.	265	2 ft. rotten timber.
140	2 ft. shingle.	276	9 ft. pumice sand.

Total depth, 276 ft. Flow, 11,520 gallons per day.

ARTESIAN BORE No. 49: SECTIONS 8 AND 9, BLOCK I, WAIHOU. (MESSRS. VOWELL AND PRICE.)

Depth in Ft.	Details.	Depth in Ft.	Details.
68	68 ft. clay.	123	8 ft. black sand.
70	2 ft. rotten timber.	128	5 ft. rotten timber.
83	13 ft. pumice sand.	130	2 ft. pumice sand.
85	2 ft. rotten timber.	133	3 ft. clay.
91	6 ft. clay.	139	6 ft. pumice sand.
100	9 ft. pumice sand.	141	2 ft. clay.
102	2 ft. clay.	154	13 ft. drift sand.
104	2 ft. pumice sand.	215	61 ft. clay.
108	4 ft. clay.	219	4 ft. sand.
113	5 ft. pumice sand.	222	3 ft. rotten timber.
115	2 ft. clay.	230	8 ft. drift sand.

Total depth, 230 ft. Flow, 4,800 gallons per day.

ARTESIAN BORE No. 50: SECTION 3, BLOCK II, WAIHOU. (MR. W. E. G. WILLY.)

Depth in Ft.	Details.	Depth in Ft.	Details.
42	42 ft. clay.	178	6 ft. pumice sand.
48	6 ft. rotten timber.	180	2 ft. rotten timber.
73	25 ft. clay.	197	17 ft. pumice sand.
88	15 ft. pumice sand.	201	4 ft. rotten timber.
101	13 ft. clay.	208	6 ft. pumice sand.
105	4 ft. sand.	210	2 ft. rotten timber.
108	3 ft. clay.	222	12 ft. pumice sand.
110	2 ft. sand.	225	3 ft. rotten timber.
119	9 ft. white clay.	250	25 ft. pumice sand.
122	3 ft. rotten timber.	252	2 ft. rotten timber.
125	3 ft. sand.	255	3 ft. pumice sand.
128	3 ft. clay.	261	6 ft. clay.
133	5 ft. rotten timber.	265	4 ft. pumice sand.
136	3 ft. clay.	268	3 ft. rotten timber.
161	25 ft. pumice sand.	274	6 ft. pumice sand.
172	11 ft. rotten timber.		

Total depth, 274 ft. Flow, 3,840 gallons per day.

ARTESIAN BORE No. 51: SECTION 17, BLOCK XI, THAMES. (MR. J. W. TREADAWAY.)

Depth in Ft.	Details.	Depth in Ft.	Details.
58	58 ft. clay.	114	9 ft. clay.
68	10 ft. pumice sand.	127	13 ft. rotten timber.
74	3 ft. rotten timber.	135	8 ft. pumice sand.
76	2 ft. pumice sand.	136	1 ft. rotten timber.
82	6 ft. clay.	166	30 ft. pumice sand.
90	8 ft. pumice sand.	171	5 ft. rotten timber.
97	7 ft. clay.	183	12 ft. clay.
103	6 ft. pumice sand.	216	33 ft. pumice sand.
105	2 ft. rotten timber.		

Total depth, 216 ft. Flow, 2,880 gallons per day.

ARTESIAN BORE No. 52: SECTION 15, BLOCK XI, THAMES. (MR. S. S. MURRAY.)

Depth in Ft.	Details.	Depth in Ft.	Details.
43	43 ft. clay.	133	2 ft. pumice sand.
51	8 ft. rotten timber.	137	4 ft. white clay.
70	19 ft. clay.	155	18 ft. drift sand.
76	6 ft. sand.	159	4 ft. shingle.
86	10 ft. rotten timber.	161	2 ft. clay.
103	17 ft. pumice sand.	176	15 ft. drift sand.
131	28 ft. clay.	179	3 ft. clay.

Artesian Bore No. 52: Section 15, Block XI, Thames—*continued*.

Depth in Ft.	Details.	Depth in Ft.	Details.
185	6 ft. drift sand.	244	4 ft. clay.
193	8 ft. shingle.	252	8 ft. hard sand.
210	17 ft. drift sand.	255	3 ft. rotten timber.
220	10 ft. shingle.	267	12 ft. clay.
231	11 ft. drift sand.	270	3 ft. pumice sand.
240	9 ft. rotten timber.	276	6 ft. rotten timber.

Total depth, 276 ft. Flow, 14,400 gallons per day.

Artesian Bore No. 53: Section 14, Block XI, Thames. (Mr. O. A. French.)

Depth in Ft.	Details.	Depth in Ft.	Details.
42	42 ft. clay.	169	29 ft. clay.
75	33 ft. rotten timber.	173	4 ft. sand.
101	26 ft. clay.	183	10 ft. clay.
104	3 ft. rotten timber.	189	6 ft. sand.
124	20 ft. clay.	199	10 ft. clay.
127	3 ft. sand.	202	3 ft. sand.
131	4 ft. clay.	220	18 ft. white clay.
133	2 ft. rotten timber.	245	25 ft. black sand.
140	7 ft. pumice sand.		

Total depth, 245 ft. Flow, 3,360 gallons per day.

Artesian Bore No. 54: Section 19, Block XI, Thames. (Mr. J. D. Crawford.)

Depth in Ft.	Details.	Depth in Ft.	Details.
69	69 ft. clay.	246	2 ft. clay.
71	2 ft. rotten timber.	252	6 ft. drift sand.
75	4 ft. pumice sand.	254	2 ft. rotten timber.
87	12 ft. clay.	264	10 ft. drift sand.
90	3 ft. sand.	266	2 ft. clay.
103	13 ft. clay.	354	88 ft. pumice sand.
129	26 ft. pumice sand.	357	3 ft. clay.
173	44 ft. rotten timber.	361	4 ft. pumice sand.
189	16 ft. sand.	362	1 ft. clay.
192	3 ft. rotten timber.	372	10 ft. pumice sand.
196	4 ft. sand.	376	4 ft. clay.
201	5 ft. clay.	379	3 ft. pumice sand.
206	5 ft. sand.	381	2 ft. rotten timber.
209	3 ft. rotten timber.	402	21 ft. pumice sand.
213	4 ft. sand.	413	11 ft. clay.
216	3 ft. clay.	419	6 ft. rotten timber.
220	4 ft. rotten timber.	424	5 ft. clay.
244	24 ft. drift sand.		

Total depth, 424 ft. Flow, 11,600 gallons per day.

Artesian Bore No. 55: Section 18, Block XI, Thames. (Mr. A. H. Rogers.)

Depth in Ft.	Details.	Depth in Ft.	Details.
83	83 ft. clay.	166	7 ft. sand.
88	5 ft. sand.	174	8 ft. white clay.
90	2 ft. rotten timber.	184	10 ft. pumice sand.
101	11 ft. sand.	198	14 ft. rotten timber.
129	28 ft. clay.	203	5 ft. sand.
135	6 ft. pumice sand.	210	7 ft. rotten timber.
148	13 ft. rotten timber.	224	14 ft. pumice sand.
152	4 ft. clay.	227	3 ft. rotten timber.
153	1 ft. rotten timber.	247	20 ft. pumice sand.
159	6 ft. clay.		

Total depth, 247 ft. Flow, 2,640 gallons per day.

Artesian Bore No. 56: Section 7, Block II, Waihou. (Mr. W. Unsworth.)

Depth in Ft.	Details.	Depth in Ft.	Details.
43	43 ft. clay.	164	21 ft. pumice sand.
58	15 ft. rotten timber.	166	2 ft. clay.
61	3 ft. clay.	168	2 ft. sand.
64	3 ft. rotten timber.	173	5 ft. clay.
88	24 ft. clay.	239	66 ft. pumice sand.
91	3 ft. sand.	241	2 ft. rotten timber.
98	7 ft. rotten timber.	248	7 ft. clay.
108	10 ft. pumice sand.	258	10 ft. pumice sand.
132	24 ft. clay.	260	2 ft. rotten timber.
136	4 ft. sand.	290	30 ft. pumice sand.
143	17 ft. clay.	295	5 ft. rotten timber.

Total depth, 295 ft. Flow, 12,000 gallons per day.

ARTESIAN BORE No. 57: SECTION 16, BLOCK XI, THAMES. (MR. WEST.)

Depth in Ft.	Details.	Depth in Ft.	Details.
64	64 ft. clay.	216	3 ft. clay.
70	6 ft. rotten timber.	229	13 ft. pumice sand.
87	17 ft. clay.	232	3 ft. rotten timber.
90	3 ft. sand.	240	8 ft. sand.
94	4 ft. rotten timber.	244	4 ft. rotten timber.
104	10 ft. pumice sand.	274	30 ft. pumice sand.
130	26 ft. clay.	276	2 ft. rotten timber.
137	7 ft. sand.	291	15 ft. pumice sand.
143	6 ft. clay.	299	8 ft. white clay.
169	26 ft. drift sand.	302	3 ft. sand.
177	8 ft. shingle.	306	4 ft. clay.
184	7 ft. drift sand.	329	23 ft. hard sand.
186	2 ft. rotten timber.	332	3 ft. clay.
196	10 ft. pumice sand.	336	4 ft. pumice sand.
198	2 ft. rotten timber.	338	12 ft. rotten timber.
205	7 ft. clay.	367	29 ft. pumice sand.
213	8 ft. pumice sand.		

Total depth, 367 ft. Flow, 4,800 gallons per day.

ARTESIAN BORE No. 58: SECTION 4, BLOCK II, WAIHOU. (MR. FLYNN.)

Depth in Ft.	Details.	Depth in Ft.	Details.
54	54 ft. clay.	216	5 ft. rotten timber.
57	3 ft. pumice sand.	218	2 ft. pumice sand.
71	14 ft. rotten timber.	226	8 ft. clay.
76	5 ft. pumice sand.	230	4 ft. rotten timber.
103	27 ft. clay.	239	9 ft. pumice sand.
105	2 ft. pumice sand.	249	10 ft. clay.
111	6 ft. rotten timber.	252	3 ft. pumice sand.
119	8 ft. clay.	257	5 ft. rotten timber.
149	30 ft. pumice sand.	267	10 ft. pumice sand.
159	10 ft. rotten timber.	269	2 ft. clay.
177	18 ft. pumice sand.	299	30 ft. pumice sand.
180	3 ft. rotten timber.	309	10 ft. clay.
190	10 ft. drift sand.	324	15 ft. pumice sand.
192	2 ft. rotten timber.	328	4 ft. rotten timber.
194	2 ft. pumice sand.	334	6 ft. pumice sand.
199	5 ft. rotten timber.	336	2 ft. clay.
211	12 ft. pumice sand.		

Total depth, 336 ft. Flow, 2,240 gallons per day.

ARTESIAN BORE No. 59: SECTION 5, BLOCK II, WAIHOU. (MR. WEST.)

Depth in Ft.	Details.	Depth in Ft.	Details.
64	64 ft. clay.	239	5 ft. sand.
70	6 ft. rotten timber.	243	4 ft. rotten timber.
75	5 ft. sand.	256	13 ft. pumice sand.
102	27 ft. clay.	258	2 ft. rotten timber.
105	3 ft. sand.	267	9 ft. pumice sand.
115	10 ft. clay.	271	4 ft. rotten timber.
151	36 ft. drift sand.	289	18 ft. pumice sand.
154	3 ft. rotten timber.	293	4 ft. rotten timber.
164	10 ft. pumice sand.	317	24 ft. pumice sand.
166	2 ft. rotten timber.	319	2 ft. clay.
171	5 ft. pumice sand.	327	8 ft. pumice sand.
175	4 ft. rotten timber.	331	4 ft. clay.
184	9 ft. drift sand.	334	3 ft. pumice sand.
188	4 ft. shingle.	335	1 ft. clay.
190	2 ft. rotten timber.	339	4 ft. pumice sand.
196	6 ft. pumice sand.	342	3 ft. rotten timber.
203	7 ft. clay.	345	3 ft. pumice sand.
208	5 ft. rotten timber.	349	4 ft. clay.
218	10 ft. sand.	384	35 ft. pumice sand.
228	10 ft. white clay.	387	3 ft. rotten timber.
232	4 ft. sand.	420	33 ft. pumice sand.
234	2 ft. rotten timber.		

Total depth, 420 ft. Flow, 9,120 gallons per day.

Approximate Cost of Paper.—Preparation, not given; printing (1,300 copies; including plan and illustrations), £35.

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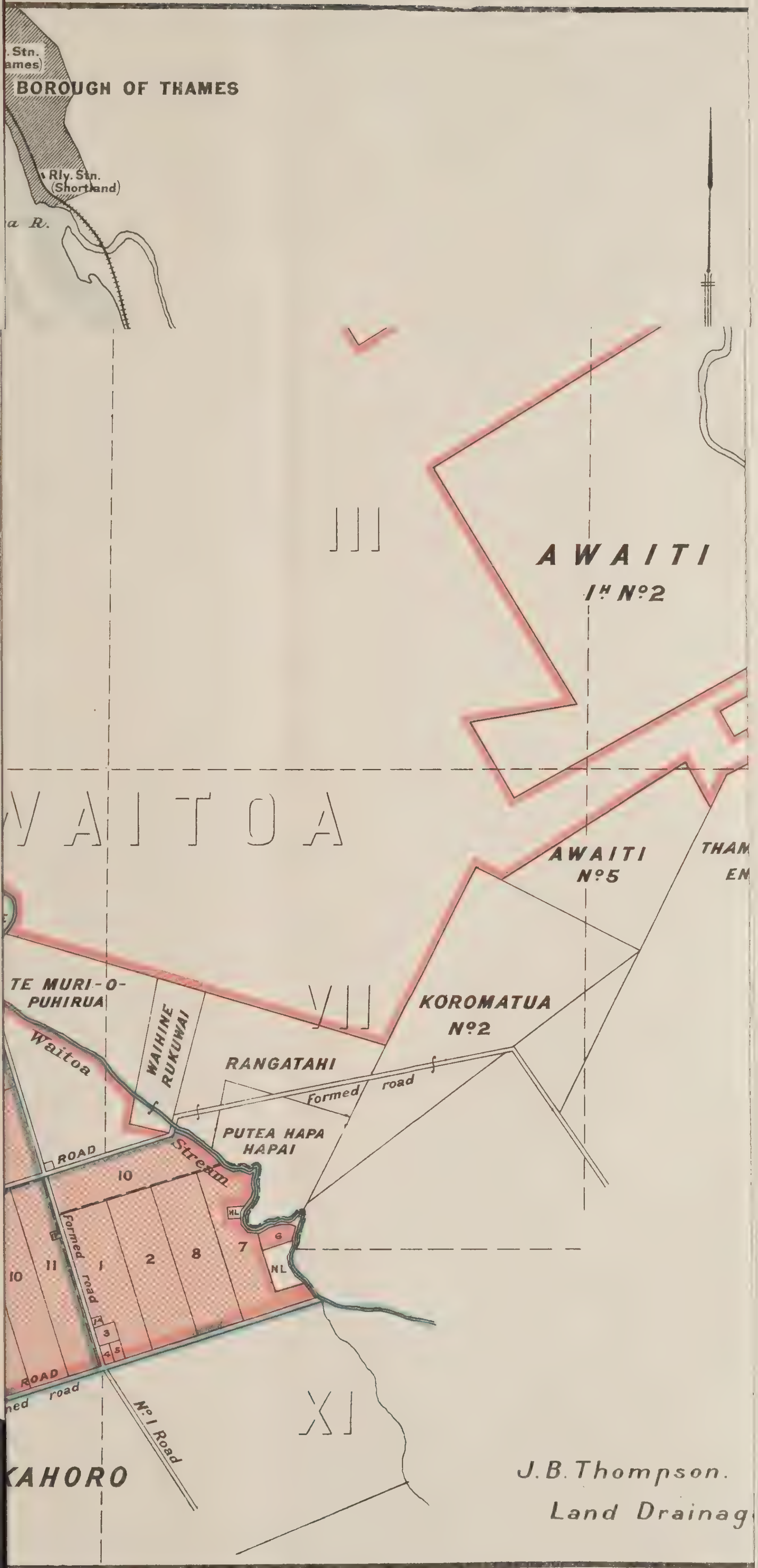

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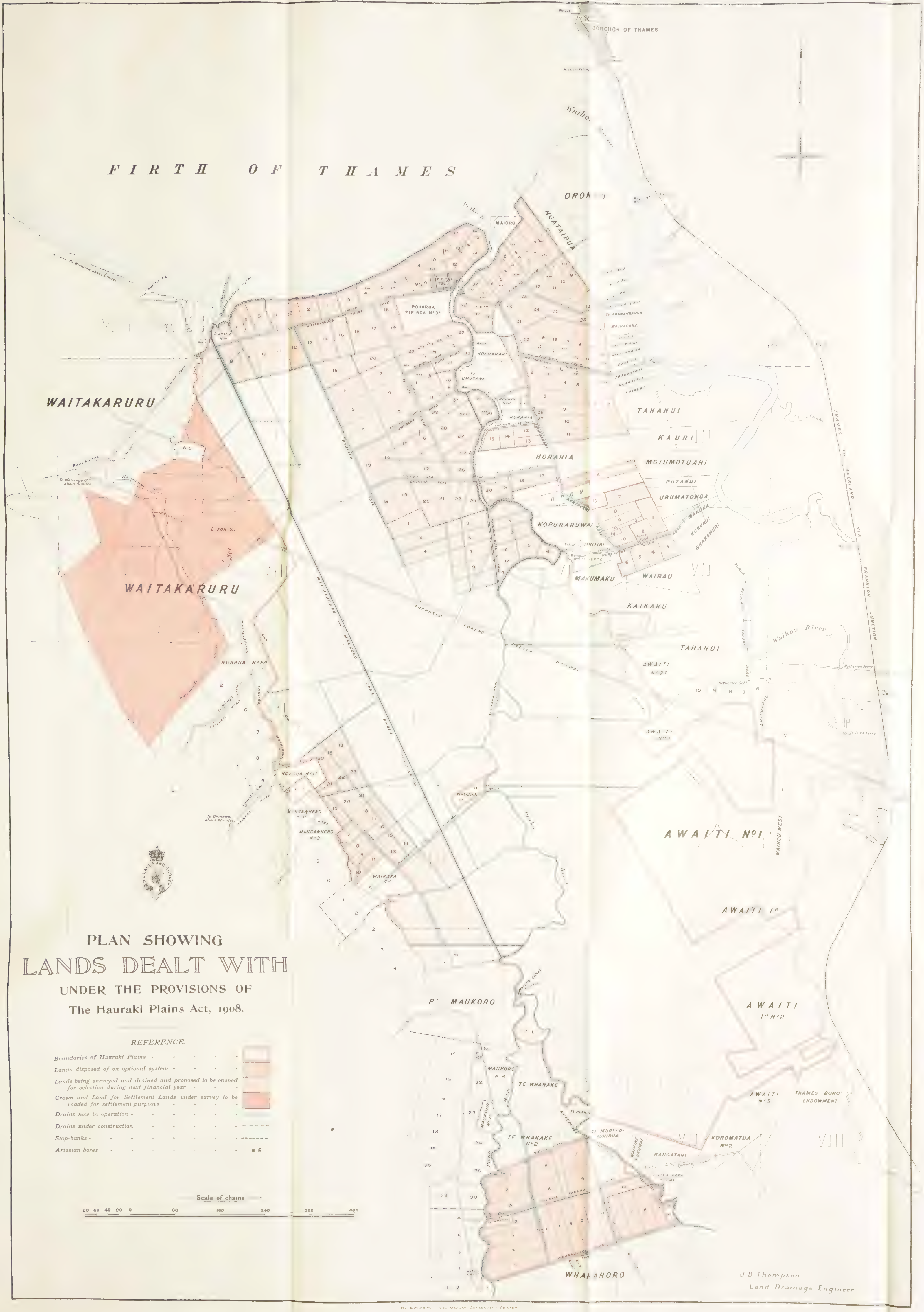
KAHORO
J.B. Thompson.
Land Drainag



PLAN SHOWING
LANDS DEALT WITH
UNDER THE PROVISIONS OF
The Hauraki Plains Act, 1908.

REFERENCE.

Boundaries of Hauraki Plains	▭
Lands disposed of on optional system	▨
Lands being surveyed and drained and proposed to be opened for selection during next financial year	▨
Crown and Land for Settlement Lands under survey to be roaded for settlement purposes	▨
Drains now in operation	—
Drains under construction	- - - - -
Stop-banks	--------
Artesian bores	● 6

Scale of chains

80 60 40 20 0 80 160 240 320 400

J. B. Thompson
Land Drainage Engineer

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1913.
NEW ZEALAND.

HAURANGI FOREST RESERVE

(PROPOSAL TO WITHDRAW PORTION OF).

Laid before Parliament in accordance with Section 28 of the State Forests Act, 1908.

LAND PROPOSED TO BE WITHDRAWN FROM STATE FOREST RESERVATION.

Description.—All that area in Wellington Land District, containing by admeasurement 12,894 acres, more or less, being part of the Haurangi Block, situated in Blocks VIII, XI, XII, XV, and XVI, Haurangi Survey District; Block IV, Kaiwaka Survey District; and Block XIII, Waipawa Survey District.

Reason for Proposed Withdrawal.—It is desired to lift the reservation in order that the land may be subdivided for settlement. The forest on 8,394 acres has been destroyed by fire; and in order to obtain better boundaries it is desirable to include with this an additional area of 4,500 acres on which the bush is still standing, but which is in imminent danger of being swept by fire when the settlers clear their holdings lower down the spurs. Fires have run through this forest at different times during the last twenty years, and it is likely that they will occur again and again until they destroy the forest to the top of the hills.

Value of Land.—About £1 5s. per acre.

Altitude.—From 425 ft. above sea-level, and rising to a maximum of nearly 3,230 ft.; but the greater part lies at an altitude of from 1,600 ft. to 3,000 ft.

Timber.—The timber is chiefly red-birch, with some silver-birch and a little rimu, hinau, and matai in patches, not suitable for milling, and principally on the high levels.

Suitability for Settlement.—The land is suitable for grazing in large areas. About 8,000 acres are partly grassed and already carrying stock.

Water-conservation.—It is considered that, in view of the almost certain destruction of the forest to the tops of the hills by fire, it would be of little use to retain the reservation on account of water-conservation.

Access.—The land is tapped by two unformed roads, and is eighteen miles distant from Martinborough.

Approximate Cost of Paper.—Preparation, not given; printing, including map (1,400 copies), £5 5s.

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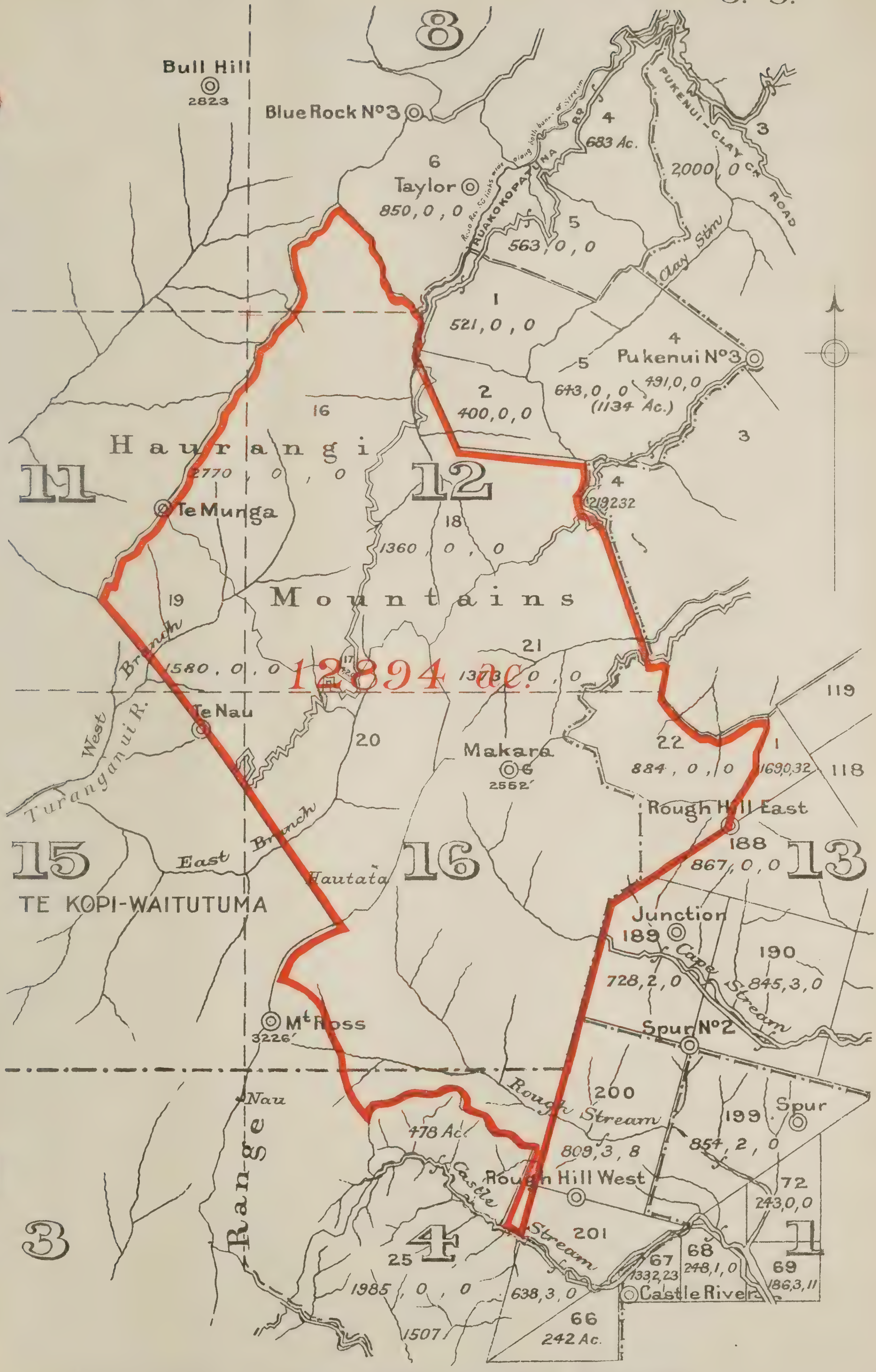

PART OF HAURANGI STATE FOREST RESERVE
PROPOSED TO BE WITHDRAWN.
SCALE, 1 MILE TO AN INCH.

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C.—10.

DEPARTMENT OF LANDS AND SURVEY.

PUBLIC DOMAINS
OF
NEW ZEALAND:

A Synopsis of the Annual Reports of Domain Boards for the Year ended 31st December, 1912.

BY

JOHN STRAUCHON, I.S.O.,
UNDER-SECRETARY.

WELLINGTON.
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NEW ZEALAND.

PUBLIC DOMAINS.

(SYNOPSIS OF ANNUAL REPORTS OF DOMAIN BOARDS.)

Presented to both Houses of the General Assembly by Command of His Excellency.

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ANNUAL REPORTS OF DOMAIN BOARDS.

The UNDER-SECRETARY FOR LANDS to the Hon. the MINISTER OF LANDS.

SIR,— Department of Lands and Survey, Wellington, 30th August, 1913.

I have the honour to transmit herewith a synopsis of the annual reports of Domain Boards for the year ended 31st December, 1912, which have been furnished in accordance with section 45 of the Public Reserves and Domains Act, 1908.

The public domains of New Zealand are an important asset to the Dominion. They provide for that love of outdoor exercises and that appreciation of the beauties of Nature which are inherent in the average New-Zealander. They are administered solely for the benefit of the people, and evidence is not wanting to show that each passing year sees them more and more appreciated by that public for whose recreation and enjoyment they were set apart.

The total number of public domains in each land district, together with the total areas, is shown in the following table:—

Land District.	Number of Domains.	Area in Acres.
Auckland	148	19,904
Hawke's Bay	33	920
Taranaki	50	1,586
Wellington	74	38,675*
Marlborough	9	763
Nelson	21	3,330
Westland	12	381
Canterbury	100	8,725
Otago	56	6,418
Southland	28	2,630
Grand totals	531	83,332

* Includes 33,000 acres set aside as a domain under section 9 of the Wanganui River Trust Act, 1891.

In 1911 there were 522 domains, comprising 81,551 acres, showing an increase in the year under review of nine domains and 1,781 acres.

Eleven new domains were constituted during the year. The reservation over Moa Flat and Ettrick Domain (420 acres), Otago Land District, was removed by section 62 of the Reserves and other Lands Disposal and Public Bodies Empowering Act, 1912, and the area declared Crown land, as it had never been used for recreation or as a public domain, and was unsuitable for the purpose. Mangapiko and Pirongia Domains, Auckland, were amalgamated for administrative purposes.

The Boards controlling the undermentioned domains have failed to furnish the yearly report, and inquiries are now being made as to the cause of default:—

AUCKLAND LAND DISTRICT.

Auckland.—Situated in Rangitoto Survey District. Area, 236 acres 1 rood.

Aratapu.—Section No. 42, Kopuru Parish. Area, 44 acres 1 rood 35 perches.

Hukerenui.—Sections Nos. 51 and 53, Block VI, Hukerenui Survey District. Area, 24 acres.

Taupiri Mountain.—Section No. 481, Taupiri Parish. Area, 162 acres 2 roods.

Te Kuiti.—Sections Nos. 29, 30, and 31, Block III, Otanake Survey District. Area, 6 acres 1 rood 38 perches.

Waitakerei.—Sections Nos. 16, 18, 19, E. 64, 65, S. 68, S.E. 75, S. 78, S. 79, 110, 111, and S. 112, Karangahape Parish; N. 54, Block V, Waitakerei Survey District; and 163 and 193, Waipareira Parish. Area, 4,732 acres.

TARANAKI LAND DISTRICT.

Normanby.—Subdivision No. 3 of Sections Nos. 17 and 589, Patea Survey District. Area, 8 acres 2 roods.

WELLINGTON LAND DISTRICT.

Eastbourne.—Sections Nos. 42, 44, and 46, Block I, and 43 and 48, Block IV, Pencarrow Survey District. Area, 551 acres.

Kaitawa.—Suburban Section No. 13, Town of Kaitawa. Area, 15 acres and 36 perches.

Makuri.—Section No. 162, and Suburban Sections Nos. 159, 167, 169, and 170, Town of Makuri. Area, 42 acres 1 rood 31 perches.

Waitotara.—Sections Nos. 154, 155, and 156, Town of Waitotara. Area, 3 roods.

NELSON LAND DISTRICT.

Braeburn.—Section No. 1, Block IV, Tutaki Survey District. Area, 5 acres.

WESTLAND LAND DISTRICT.

Ahaura.—Sections Nos. 12, Block I, Ahaura Survey District, and 30, Block XIII, Mawheraiti Survey District. Area, 100 acres.

Nelson Creek.—Section No. 25, Block VIII, Mawheranui Survey District. Area, 49 acres 3 roods 18 perches.

Paroa.—Reserve No. 1061, Block XVI, Greymouth Survey District. Area, 3 acres and 6 perches.

Rimu.—Section No. 356, Block V, Kanieri Survey District. Area, 5 acres and 19 perches.

OTAGO LAND DISTRICT.

Manuherikia.—Section No. 1, Block XXXVII, Town of Alexandra. Area, 96 acres 3 roods 5 perches.

Oturehua.—Section No. 289, Block I, Blackstone Survey District. Area, 7 acres and 20 perches.

Ranfurly Park.—Suburban Sections Nos. 7 and 8, Block I, Town of Ranfurly. Area, 52 acres and 31 perches.

SOUTHLAND LAND DISTRICT.

Winton.—Sections Nos. 1 to 5, 7 to 12, 17 to 22, 24 to 28, Block IX; 1 to 5, 7 to 13, 17 to 23, and 25 to 29, Block X; 1 and 32, Block XI; 1 and 27, Block XII; 1 and 23, Block XVI; 1 and 24, Block XVII; and 1 and 24, Block XVIII, Town of Winton. Area, 14 acres.

In conclusion, I would again express the Department's appreciation of the generally efficient management of domains by their respective Boards. A glance through the summarized reports shows clearly how the various domains are being improved and beautified by the energy of these men. The successful and progressive management of a public domain often calls for rare business and administrative qualities, and in all cases for a great deal of public-spiritedness; and in carrying out the great national work entrusted to them they deserve hearty co-operation and support.

I have, &c.,

JOHN STRAUCHON,

Under-Secretary for Lands.

AUCKLAND LAND DISTRICT.

AHIRAU DOMAIN.

Section No. 17, Block V, Harataunga Survey District. Area, 16 acres 2 roods.

Under the control of the Commissioner of Crown Lands, Auckland.

ARAWA PARK DOMAIN.

Section No. 23, Rotorua Rural Sections. Area, 46 acres 3 roods 17 perches.

Work done during year: New and up-to-date buildings erected. Improvements now on domain: Fencing, grandstand, and trees. Used for races, sports, and football. Leased. Proposed operations for ensuing year: Laying down in grass the avenue from main entrance to grandstand.

AVONDALE DOMAIN.

Section No. 361, Waikomiti Parish. Area, 38 acres 2 roods.

Work done during year: 2¾ acres of scrub cleared and ploughed, and notice-boards erected. Improvements now on domain: Boundary-fencing, 6 acres grassing, and shelter-trees on boundary. Used by picnic and camping parties. Proposed operations for ensuing year: Grassing ploughed area and forming a sports-ground.

AWHITU DOMAIN.

Section No. 58c, Awhitu Parish. Area, 8 acres 3 roods 30 perches.

Work done during year: Clearing and draining. Improvements now on domain: Fencing, grassing, and draining. Used for picnics. Leased on improvement conditions. Proposed operations for ensuing year: Keeping drains clear and cutting tea-tree.

BIRKENHEAD DOMAIN.

Section No. 122, Takapuna Parish. Area, 112 acres 2 roods.

Six acres leased on improvement conditions.

BUFFALO DOMAIN.

Sections Nos. 31 and 32, Village of Buffalo, Suburbs of Coromandel. Area, 20 acres 1 rood 39 perches.

Work done during year: The levelling of portion of the domain for recreation continued, and tennis-court formed. Improvements now on domain: Post-and-wire, galvanized-iron, and picket fencing and gates. Used for football, picnics, tennis, &c. Proposed operations for ensuing year: Completion of tennis-court and eradication of noxious weeds.

CAMBRIDGE DOMAIN.

Sections Nos. 576, 359, 360, 361, 361A, 367, 581, 578, 579, 363, 363A, 364, 365, 366, 368, and 370, Town of Cambridge East, and the Cambridge East Town Belt. Area, 484 acres 1 rood 7 perches.

Work done during year: New tennis-courts and croquet-lawns formed, breeding-pens for ducks erected, ornamental trees planted, portion of lake cleared of raupo, gorse and noxious weeds grubbed and cleared, and general improvements made to the ground. Improvements now on domain: Band-rotunda, pavilion, bowling-greens, tennis-courts, breeding-pens for water-fowl, native and ornamental trees, seats, flower-beds, walks, fences, hedges, tool-shed, rustic bridge, and gates. The pavilion, rotunda, and walks are lighted with gas, and the lake is stocked with white and black swans, mallard, paradise, teal, and other ducks. Used for bowls, tennis, band-concerts, picnics, general recreation, and as a promenade. Proposed operations for ensuing year: Generally improving the grounds, grubbing and clearing gorse and noxious weeds, clearing raupo from the river, planting more ornamental trees and shrubs, and laying out more bowling-greens. The greater portion of the domain is leased.

CASNELL ISLAND DOMAIN.

Section No. 196, Mahurangi Parish. Area, 16 acres 3 roods.

Work done during year: Noxious weeds cleared. Improvements now on domain: Grassing and shelter-trees. Used for picnics.

DEVONPORT DOMAIN.

Allotments Nos. 36, 37, and 39 of Section No. 2, and Mount Victoria Reserve, Takapuna Parish. Area, 41 acres 2 roods 36 perches.

Work done during year: Cricket-pitches top-dressed and rolled; football-ground cleared of noxious weeds and top-dressed; tennis, croquet, and bowling greens weeded, top-dressed, and well rolled; fences and paths renewed, noxious weeds cleared, and overgrowth cut. Improvements now on domain: Fencing, cricket and football grounds, bowling-green, croquet lawn, tennis-courts, pavilions, seats, draining, conveniences, and trees. Used for cricket, football, bowls, tennis, croquet, and hockey. Portion leased. Proposed operations for ensuing year: Generally improving and maintaining the several recreation-grounds by levelling, weeding, and top-dressing, and where necessary renewing paths on Mount Victoria.

DRURY DOMAIN.

Allotment No. 85 of Section No. 8, Village of Drury. Area, 3 acres and 32 perches.

Work done during year: The domain was sown down in English grasses by the lessee. Improvements now on domain: Fencing, clearing, draining, and ploughing. Proposed operations for ensuing year: Repairing fences and clearing weeds. Used for grazing.

EASTERN MAHURANGI DOMAIN.

Section No. 176, Parish of Mahurangi. Area, 108 acres and 15 perches

Nil report furnished.

EAST TAMAKI DOMAIN.

Sections Nos. 140 and 40, Pakuranga Parish. Area, 18 acres 1 rood 35 perches.

Work done during year: Portion of the reserve ploughed and laid down in grass, and noxious weeds cut. Improvements now on domain: Fencing, road, plantations, and dam. Used for sports and picnics. Proposed operations for ensuing year: General improvement and maintenance of grounds.

EPSOM DOMAIN.

Allotments Nos. 180, 180A, and 182 of Section No. 10, Suburbs of Auckland. Area, 19 acres 1 rood 5 perches.

Work done during year: Gates erected. It is proposed to plant trees and form footpaths. Leased.

EPSOM AND MOUNT EDEN DOMAIN.

Part of Allotment No. 46, Allotment No. 49, and part of Allotment No. 48, of Section No. 6, Suburbs of Auckland. Area, 29 acres 3 roods 16 perches.

Work done during year: Grounds maintained in good order, and further work done in the direction of making portion fit for cricket, &c. Improvements now on domain: Fencing, levelling, and grassing. Used for general recreation.

GATE PA DOMAIN.

Sections Nos. 41, 41A, 42, and part 13, Suburbs of Tauranga. Area, 12 acres 1 rood 37 perches.

Both portions of the domain are now clear of gorse, and the fences are in fair order. Leased.

GRAHAMTOWN DOMAIN.

Allotment No. 391, Village of Grahamtown. Area, 8 acres 1 rood 21 perches.

Work done during year: Open drain cut across domain and about 4 acres ploughed. Proposed operations for ensuing year: Laying pipes in drain, and sowing down domain in grass.

Hamilton Domain.

Sections Nos. 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 156, 157, 158, 159, 160, 161, 162, 163, 164, 173, 174, 175, 176, 177, 178, 180, 181, 182, 183, 405A, 209, 210, 214, 215, 244, 245, 247, 248, 249, 281, 282, 331, 332, 333, 334, 337, 338, 339, 340, 343, 344, 345, 346, 349, 350, 351, 352, 355, 356, 357, 358, 359, 360, 361, 362, 363, 365, 366, 367, 368, 369, 370, 371, 372, 372A, 373, 373A, 380, 381, 382, 383, 384, 385, 386, 387, 388, 389, 321, 322, 323, 324A, 325A; 326, Town of Hamilton East; Nos. 28, 146, 147, 149, 194, 195, 197, 198, 206, 207, 209, 213, 214, 215, 216, 217, 218, 6, 225, 226, 227, 228, 251, 454, 320, 324, 325, 335, 337, 350, 352, 369, 376A, 129, 140, 142, 399A, 170, 171, Town of Hamilton West; Nos. 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 412, Hamilton East Belt; Nos. 1, 2, 3, 4, 5, 7, 8, 13, 14, 16, 17, 18, 21, 1A, 2A, 3A, 4A, 5A, 7A, 8A, 13A, 14A, and parts of 19 and 20, Hamilton West Belt; and Section No. 372, Parish of Te Rapa, Hamilton Lake, 141 acres. Area, 508 acres 3 roods 21 perches.

Work done during year: Seddon Park laid down in grass, and about 4 acres prepared for cricket-wickets; new fence erected on Steele Park; Lake Reserve cleared of undergrowth; recreation-grounds generally maintained, trees cut back, and paths formed. It is proposed to expend £2,000 in pavilions and in laying out gardens. Recreation-grounds will be generally improved. Improvements now on domain: Portion of Lake Reserve planted with trees and shrubs, banked asphalt cycle-track, conveniences, ladies' dressing-shed, grass cricket-pitch, fencing, and grassing. The domain is used for sports, football, cricket, hockey, and picnics.

Helensville Domain.

Section No. 10, Block IV, Kaipara Survey District. Area, 38 acres 2 roods 21 perches.

Work done during year: Bowling, tennis, and croquet greens completed; flower beds and borders formed; and 15 acres of reserve cultivated. Used for bathing, sports, and as a pleasure-ground. Proposed operations for ensuing year: Water-boring and erecting pavilion and windmill, ladies' swimming-bath, and twelve additional private baths.

Hoteo Domain.

Section No. 34B, Block XII, Pakiri Survey District. Area, 16 acres 1 rood 5 perches.

Nil report furnished.

Howick Domain.

Suburban Sections Nos. 141 to 148, Town of Howick, and Allotment No. 15 of Section No. 7, Small Farms, near Howick. Area, 9 acres 2 roods 6 perches.

Improvements now on domain: Three tennis-courts, cricket-pitch, two small pavilions, 6 chains of 24-in.-pipe drain, and a small plantation of native trees. Used for cricket, tennis, and general recreation.

Hunua Domain.

Section No. 89, Hunua Parish. Area, 40 acres 1 rood 6 perches.

This domain is under the control of the Commissioner of Crown Lands, Auckland. It contains a strip of bush along the stream.

Kaiwaka Domain.

Section No. 125, Kaiwaka Parish. Area, 6 acres 1 rood 13 perches.

This domain is under the control of the Commissioner of Crown Lands, Auckland. It contains some fine native bush. 2 acres have been ploughed, cleared, and sown, and an asphalt tennis-court and a cricket-pitch laid down. Used for tennis, cricket, football, and hockey.

Katikati Domain.

Sections Nos. 25 and 26, Katikati Parish. Area, 185 acres 2 roods.

Work done during year: The fencing of the entire area completed. Improvements now on domain: Fencing, wells, pump and pipes, road, camping-ground, bathing-sheds, and tracks. Used for sports, picnics, camping, and regattas. Proposed operations for ensuing year: Acquiring land for road to give access to domain, and formation of road.

Kauri Domain.

Part of Lot No. 23 of Section 2, Block XI, Waipoua Survey District. Area, 41 acres 3 roods.

This domain is under the control of the Commissioner of Crown Lands, Auckland. Improvements now on domain: Fencing, gates, and grassing. Used for picnics. Mr. Trounson, a settler in the district, is honorary caretaker for this domain.

Kawakawa Domain.

Sections Nos. 47, Ruapekapeka Parish, and 10 and 26, Suburbs of Kawakawa, and Block II, Village of Waiomio. Area, 89 acres 2 roods 14 perches.

Work done during year: Weeds cleared, approach gravelled, and fencing repaired. Improvements now on domain: Fencing, gates, approaches, clearing, grassing, trees, and shrubs. Used for sports. Leased. Proposed operations for ensuing year: Ploughing and grassing.

KAWHIA DOMAIN.

Sections Nos. 1, Block XI, Town of Kawhia, and 1, Block X, Kawhia North Survey District. Area, 7 acres and 37 perches.

It is proposed to fence, drain, and sow the domain down in grass if funds can be raised for the work.

KIHIKIHI DOMAIN.

Sections Nos. 220 to 225, 228 to 241, and 359 to 380, Town of Kihikihi. Area, 42 acres.

Work done during year: Fencing and gates erected. Improvements now on domain: Fencing, grandstand, outbuildings, and plantation. Used for football, polo, sports, races, and picnics. Proposed operations for ensuing year: Fencing, planting shelter-trees, and grading and levelling racecourse.

KIRIKIRIROA DOMAIN.

Sections Nos. 173 and 174, Suburbs of Newcastle North, Block VII, Newcastle Survey District. Area, 10 acres.

Work done during year: 20 chains of fencing completed, and ground cleared of tea-tree.

KOHEROA DOMAIN.

Section No. 8, Suburbs of Mercer. Area, 4 acres 2 roods 20 perches.

This domain is under the control of the Commissioner of Crown Lands, Auckland.

KOHUKOHU DOMAIN.

Part foreshore of Hokianga River, Block X, Mangamuka Survey District, and Sections Nos. 2 and 3, Town of Kohukohu (Government). Area, 11 acres 3 roods 18 perches.

Work done during year: Banked track for cycling and running formed around domain, and draining, reclamation, and repairs to retaining-wall carried out. Improvements now on domain: Retaining-wall, fences, drains, refreshment-booth, and reclamation. Used for picnics, cricket, football, sports, and general recreation. Proposed operations for ensuing year: Erecting grandstand, further reclamation, grassing, tree-planting, and general improvements.

KOPURU DOMAIN.

Section No. 141, Kopuru Parish. Area, 1,077 acres.

Work done during year: Marram-grass planted to prevent sand-drift. Improvements now on domain: Fencing, roads, paths, and cottages. Used for camping. Leased. Proposed operations for ensuing year: Planting marram-grass.

KOPURU TOWN DOMAIN.

Section No. 142, Kopuru Parish. Area, 6 acres and 25 perches.

Work done during year: Gorse grubbed and earth carted for levelling. Improvements now on domain: Fencing, grassing, cottage, and shop. Used for general recreation. Portion leased.

KORORAREKA DOMAIN.

Section No. 5, Block I, Town of Russell. Area, 7 acres 1 rood 30 perches.

This domain is under the control of the Commissioner of Crown Lands, Auckland. Improvements now on domain: Shed, concrete cricket-pitch, clearing, and grassing. Used for cricket and general recreation.

KUAOTUNU DOMAIN.

Section No. 6, Block II, Otama Survey District. Area, 11 acres 3 roods 30 perches.

Work done during year: Tile draining, ploughing, and grassing. Improvements now on domain: Fencing, gates, plantations, shelter-shed, and grassing. Used for cricket, football, and picnics. Leased. Proposed operations for ensuing year: Draining, clearing, and grassing.

LEAMINGTON DOMAIN.

Sections Nos. 53, part 54, and 56 to 94, Town Belt of Cambridge West, and 569, Town of Cambridge West. Area, 321 acres 1 rood 4 perches.

Work done during year: 20 acres grassed, windmill erected, live hedge and ornamental and shelter trees planted, hedges trimmed, and grounds generally improved. Improvements now on domain: Tennis-courts, band-rotunda and pavilion, tool-shed, shower-baths, copper, shed, windmills, tanks and water-service, ornamental and shelter trees, fences, hedges, and swings. Used for hockey, tennis, cricket, football, and picnics; portion used for grazing. Proposed operations for ensuing year: Painting band-rotunda, pavilion, and gates; concreting sheds, planting ornamental trees, and generally improving the grounds.

LICHFIELD DOMAIN.

Section No. 26, Block XV, Patetere North Survey District. Area, 10 acres 3 roods 8 perches.

During the year the domain has been ploughed and sown with oats. Improvements now on domain: Fencing. Used for sports and picnics. The domain is leased on improvement conditions. Proposed operations for ensuing year: Grassing.

MACKAYTOWN DOMAIN.

Sections Nos. 1 and 2, Block VII, Town of Mackaytown. Area, 15 acres 1 rood 14 perches.

Work done during year: Scrubbing, draining, and completion of levelling and sowing lower portion of domain. Improvements now on domain: Fencing, levelling, grassing, draining, and small building. Used for sports, football, cricket, hockey, and picnics. Proposed operations for ensuing year: Renewing fences, top-dressing domain, and removing and repairing pavilion.

MAHURANGI DOMAIN.

Section No. 96B, Mahurangi Parish. Area, 63 acres 3 roods 38 perches.

Nil report furnished.

MAMAKU DOMAIN.

Sections Nos. 1 to 5, Block XIV; 1, Block XV; 2 to 6, Block XII; and 2 to 6, Block XIII, Village of Mamaku. Area, 25 acres 1 rood 20 perches.

Work done during year: General maintenance. Improvements now on domain: Fencing, shelter-shed, and grassing. Used for sports, picnics, tennis, and general recreation. Proposed operations for ensuing year: Clearing, logging, stumping, fencing, and grassing of 3 acres; ploughing and enlarging recreation-ground, cutting paths through native bush, tree-planting, and general maintenance.

MANGAPIKO DOMAIN.

Sections Nos. 74, 87, and 100B, Mangapiko Parish, and 75A, Ngaroto Parish. Area, 234 acres 2 roods 9 perches.

Work done during year: Fences erected and grass laid down. Improvements now on domain: Fencing and plantation. Used for grazing and races. Proposed operations for ensuing year: Erecting windmill, sinking well, and laying down permanent pastures.

MANGERE DOMAIN.

Sections Nos. 200, Manurewa Parish, and 47A, Mangere Village. Area, 95 acres 2 roods 16 perches.

Work done during year: Trees planted, fences repaired and erected, plantations trimmed, and noxious weeds eradicated. Improvements now on domain: Fencing, plantations of ornamental trees, drive, and water-supply laid on. Used for picnics and general recreation. Proposed operations for ensuing year: General maintenance.

MANGONUI DOMAIN.

Allotment No. 265, Town of Mangonui. Area, 5 acres 3 roods 33 perches.

Nil report furnished.

MARAEORA DOMAIN.

Sections Nos. 174A, 175, and 196A, Tauhoa Parish. Area, 51 acres 2 roods 35 perches.

This domain is under the control of the Commissioner of Crown Lands, Auckland. Leased, the lessee being required to eradicate noxious weeds.

MATAMATA DOMAIN.

Block XII, Matamata Township. Area, 9 acres 3 roods 4 perches.

Work done during year: Ploughed and sown in swedes. Improvements now on domain: Fencing, shelter-trees, well, and pump. Used for cricket, football, hockey, tennis, and picnics. It is proposed to sow the area in oats.

MERCER DOMAIN.

Sections Nos. 136 and 139, Koheroa Parish. Area, 84 acres 3 roods.

Work done during year: Fences repaired, noxious weeds eradicated, and willows planted. Used for cricket and football. Proposed operations for ensuing year: Filling in holes on football-ground, repairing fences, and clearing weeds.

MOTUTARA DOMAIN.

Northern and southern portions of Section No. 2, Block IX, Kumeu Survey District. Area, 73 acres and 16 perches.

Work done during year: General maintenance. Sports held on the domain returned a profit of £26 16s. Improvements now on domain: Fencing, draining, and conveniences. Used for camping, sports, and picnics. Proposed operations for ensuing year: Roading.

MOUNT ALBERT DOMAIN.

Part of Allotment No. 100, Titirangi Parish, and Allotments Nos. 176 and 177 of Section 10, Suburbs of Auckland. Area, 42 acres and 12 perches

Work done during year: General maintenance. Improvements now on domain: Fences, levelling, grassing, shrubs, native trees, pavilion, flagstaff, water-service, and cattle-trough. Used for cricket, football, hockey, picnics, and grazing. Proposed operations for ensuing year: Formation of new approach to Morningside Reserve.

MOUNT EDEN DOMAIN.

Allotments Nos. 1A of Section No. 6 and 68A of Section No. 10, Suburbs of Auckland. Area, 63 acres 2 roods 38 perches.

Work done during year: General maintenance. Improvements now on domain: Fencing, plantations, roads, seats, and tram shelter-shed at foot of mountain. Used for recreation and scenic purposes; portion leased. Proposed operations for ensuing year: Generally improving the domain.

MOUNT HOBSON DOMAIN.

Allotment No. 2A of Section No. 11, Suburbs of Auckland. Area, 23 acres 1 rood.

Work done during year: Paths, channels, and culverts kept in order; shrubs attended to; the new reservoir has been completed on the top of the mountain. Improvements now on domain: Fences, three plantations of native and other trees and shrubs, paths, gates, and seats, and tool-house. The domain is used by the public as a pleasure resort. Proposed operations for ensuing year: Keeping paths in good order and attending to trees and shrubs.

MOUNT MAUNGANUI DOMAIN.

Section No. 1, Block VI, Tauranga Survey District, and Motuotau and Moturiki Islands. Area 203 acres 3 roods 27 perches.

Improvements now on domain: Wooden wharf, stone pier, two miles of tracks, plantation, and water-supply. Used for picnics and camping. Leased. Proposed operations for ensuing year: Improving wharf, erecting shelter-shed, providing water-supply, improving tracks and roadway, and erecting gates.

MOUNT RICHMOND DOMAIN.

Allotment No. 60 of Section No. 12, Waitemata Parish, Suburbs of Auckland. Area, 33 acres.

Work done during year: Drinking-trough for cattle erected, ground around trees cleared and dug, and shrubs planted. Improvements now on domain: Post-and-wire and live fences, stone wall across quarry-face, and small plantation. The domain is leased, the lessee being required to keep the fences in order and the ground clear of noxious weeds. It is proposed to open a new entrance to the reserve from the Panmure Road, and to continue the planting of trees and shrubs.

MOUNT ROSKILL DOMAIN.

Allotments Nos. 85B and 85F of Section No. 10, Suburbs of Auckland. Area, 11 acres 2 roods 22 perches.

Boring for water was carried out successfully during the year. Leased for grazing.

MOUNT SMART DOMAIN.

Allotment No. 22 of Section No. 17, Suburbs of Auckland. Area, 32 acres 2 roods 22 perches.

Work done during year: Fences repaired and noxious weeds cut and burnt. Improvements now on domain: Fencing and water-supply. Used for grazing.

MOUNT ST. JOHN DOMAIN.

Allotment No. 12A of Section No. 11, Suburbs of Auckland. Area, 8 acres 2 roods 21 perches.

Improvements now on domain: Fencing, planting, and seats. Used as a public resort and for grazing.

NAUMAI DOMAIN.

Section No. 213, Parish of Tauhoa. Area, 33 acres 1 rood.

Nil report furnished.

NEWMARKET DOMAIN.

Allotments Nos. 32 and 33 of Section No. 4, Suburbs of Auckland. Area, 3 acres 2 roods.

Nil report furnished.

NGAROTO DOMAIN.

Section No. 176A, Ngaroto Parish. Area, 6 acres 1 rood.

Leased on improvement conditions.

NGARUAWAHIA DOMAIN.

Sections Nos. 123A, Horotiu Parish, 101, Suburbs of Newcastle, and 670 and 663A, Town of Ngaruawahia. Area, 131 acres 1 rood 28 perches.

Improvements now on domain: Fences and buildings. Used principally for races. Leased.

NGATIKOI DOMAIN.

Section No. 15, Block XVI, Ohinemuri Survey District. Area, 133 acres 3 roods.

Improvements now on domain: Fencing and shelter-trees.

NIKAU DOMAIN.

Section No. M. 129, Oruawharo Parish. Area, 22 acres.

This domain is under the control of the Commissioner of Crown Lands, Auckland.

NORTHCOTE DOMAIN.

Sections Nos. 1 to 10 and 68, Town of Northcote. Area, 3 acres 1 rood 29 perches.

Work done during year: General maintenance. Improvements now on domain: Fencing, building, seats, and trees. Used as a public resort and for general recreation.

OHINEWAI DOMAIN.

Section No. 49, Taupiri Parish. Area, 62 acres 2 roods

Leased, the lessee being required to plough, fence, and grass the area.

OHIWA DOMAIN.

Section No. 304, Waiotahi Parish. Area, 5 acres 3 roods 30 perches.

This domain is under the control of the Commissioner of Crown Lands, Auckland. It consists of fern and scrub land. Leased, the tenant being required to clear noxious weeds.

ONEHUNGA DOMAIN.

Allotment No. 14 of Section No. 36, Town of Onehunga. Area, 5 acres 1 rood 31 perches.

Work done during year: Fences repaired, useless trees cut down, and paths tarred. Improvements now on domain: Fencing, tarred path, brick cottage, and ornamental trees. Used for picnics and as a playground for children. Proposed operations for ensuing year: Draining and plumbing work to be attended to.

ONE TREE HILL DOMAIN.

Allotments Nos. 54 and part of 11 of Section No. 12, Suburbs of Auckland. Area, 121 acres and 28 perches.

Work done during year: Two rooms added to lodge, rustic and other fences erected, road and drives repaired and generally improved, ornamental trees and shrubs planted, terracing carried out, fences painted and repaired, and swings and giant-strides erected. A space levelled at the top of the hill for the interment of the late Sir John Logan Campbell has been beautifully fenced and laid out. Improvements now on domain: Fencing, draining, caretaker's lodge, shelter-shed, plantations, avenues of trees (including a very fine avenue of oaks over a mile in length), swings, maypole, seats, conveniences, water-supply, cricket-pitches, golf-links, and drives. Used for sports, golf, cricket, football, basketball, picnics, and drives. Proposed operations for ensuing year: A monument is to be erected at top of hill to Sir John Logan Campbell and the Native race, new fences to be erected, and new drives and footpaths formed.

OPAHEKE DOMAIN.

Allotment No. 132 of Section No. 2, Opaheke Parish. Area, 16 acres 2 roods 6 perches.

Used for general recreation. Improvements now on domain: Fencing and grassing. The domain is leased for a term of seven years.

OPOTIKI DOMAIN.

Allotments Nos. 12, 13, and 28, 168 to 177, and 207 to 216, of Section No. 1; and 84, 85, 86, 130, 131, and 132 of Section No. 2, Town of Opotiki. Area, 11 acres 3 roods.

Work done during year: General maintenance. Improvements now on domain: Fencing, ornamental trees, pavilion, and conveniences. Used for cricket, sports, and picnics. Leased. Proposed operations for ensuing year: Generally improving the domain, and the erection of a monument to the memory of the soldiers buried in the old Military Cemetery.

OPOTIKI AND WAIOEKA DOMAIN.

Sections Nos. 82, 83, 84, 85, and 333, Waioeka Parish. Area, 299 acres 1 rood.

Work done during year: Iron gates and concrete posts erected at main entrance to racecourse, and shutters at grandstand; fences repaired, blackberries cut, gates erected, and fencing carried out on Bush Reserve. Improvements now on domain: Fencing, plantation of ornamental trees, draining, river-protection works, ornamental gates, racecourse, grandstand, ladies' room, and saddling-paddock. Used for races, sports, picnics, and grazing. Proposed operations for ensuing year: Fencing, draining, tree-planting, and general maintenance

ORUAMO DOMAIN.

Section No. 218, Takapuna Parish. Area, 5 acres 2 roods 7 perches.

Improvements now on domain: Fencing and grassing. Used for sports and picnics.

ORUAWHARO DOMAIN.

Section No. 40A, Parish of Oruawharo. Area, 54 acres.

Nil report furnished.

OTAHUHU DOMAIN.

Suburban Section No. 19, Town of Otahuhu. Area, 5 acres.

Improvements now on domain: Fences and hedges. Leased.

OTAU DOMAIN.

Allotments Nos. 14, 31 to 36, and 41 to 43 of Section No. 1, and 26, 28, 31, and 32 of Section No. 2, Village of Otau. Area, 2 acres and 15 perches.

This domain is under the control of the Commissioner of Crown Lands, Auckland. Noxious weeds have been cleared.

OTOROHANGA DOMAIN.

Section No. 8, Block IV, Orahiri Survey District. Area, 37 acres 3 roods 23 perches.

Improvements now on domain: Fencing, draining, and grassing. Proposed operations for ensuing year: Draining, ploughing, clearing, and grassing.

PAENGAROA DOMAIN.

Section No. 14, Village of Paengaroa. Area, 6 acres 1 rood 27 perches.

Domain Board appointed in September, 1912.

PAEROA DOMAIN.

Sections Nos. 3 to 8 and 11 and 12, Block IX; 2 to 11, Block X; 1 and 2, Block XI; Block XIV; 5 to 7 and 8 to 12, Block XV; 1 to 3, Block XXI; and Block XXII, Town of Paeroa. Area, 21 acres 3 roods 24·5 perches.

Work done during year: Relaying asphalt tennis-court, clearing, and general maintenance. Improvements now on domain: Fencing, entrance-gates, five plantations of shrubs with protective fences, two tennis-courts, two croquet-lawns, bowling-green, football, cricket, and hockey grounds, band-rotunda, ornamental trees and shrubs, eleagnus hedges, two pavilions, cottage, and conveniences. Used for tennis, football, hockey, bowls, and general recreation. Portion leased. Proposed operations for ensuing year: General maintenance.

PAHI DOMAIN.

Section No. 102, Suburbs of Pahi. Area, 7 acres 2 roods 8 perches.

Work done during year: Gate erected. Improvements now on domain: Fencing and trees. Used for sports. Portion leased.

PAHUREHURE DOMAIN.

Lot 1 of Section No. 1 and part of Section No. 2, Town of Papakura. Area, 3 acres 3 roods 10 perches.

Improvements now on domain: Fencing and grassing. Used for grazing.

PAIAKA DOMAIN.

Parts of Sections Nos. 180, 181, and 182, Waipa Parish. Area, 22 acres 3 roods 8 perches.

This domain consists of fine native bush.

PAKIRI DOMAIN.

Section No. 28A, Parish of Pakiri. Area, 8 acres.

The domain is leased, the lessee being required to grass and fence the area.

PAKURANGA DOMAIN.

Allotments Nos. 17, 18, 21, and 22 of Section No. 5 of Small Lots near Howick, Otahuhu Survey District. Area, 25 acres 2 roods 25 perches.

Work done during year: Excavation and levelling. Improvements now on domain: Pavilion and outbuildings, well, cricket-ground, plantations, fencing, and stiles. Used for sports, cricket, and picnics. Portion leased.

PANMURE DOMAIN.

Allotments Nos. 45, 63, 64, 77, and 78 of Section No. 2, Village of Panmure. Area, 5 acres.

Improvements now on domain: Stone wall on three sides, dressing-sheds, stiles, and gate. Used for sports, football, and picnics. Leased. Proposed operations for ensuing year: General improvements.

PARAHAKI DOMAIN.

Northern, western, and part of eastern portions of Section No. 17, Parahaki Parish. Area, 44 acres 3 roods 24 perches.

The domain is mostly covered with native bush, with grass in places, and contains cascades and waterfalls. The Board proposes to protect the bush.

PAREMOREMO DOMAIN.

Sections Nos. 76A and 94A, Paremoremo Parish. Area, 6 acres 1 rood 1 perch.

This domain is situated in Albany Village, and is unimproved and unoccupied. The Albany Agricultural Association propose to improve the domain.

PARNELL DOMAIN.

Allotments Nos. 89 of Section No. 1, 34 of Section No. 4, 5A of Section No. 14, and part of Lot 23 of Section No. 2, Suburbs of Auckland. Area, 10 acres 2 roods 25 perches.

Portion of the domain is leased.

PATUMAHOE DOMAIN.

Section No. S.W. 13, Waiau Parish. Area, 22 acres and 20 perches.

This domain is under the control of the Commissioner of Crown Lands, Auckland. It is situated on the Drury–Waiuku Road, and covered with fern and scrub.

PIRONGIA DOMAIN.

Allotments Nos. 510, 511, 512, and 513, Town of Pirongia East, the Town Belt of Pirongia East, and the Town Belt of Pirongia West; Allotments Nos. 74, 87, and 100B, Mangapiko Parish, and 75A, Ngaroto Parish. Area, 665 acres 1 rood 17 perches.

Work done during year: Pastures laid down, fencing, and repairs. Noxious weeds have been kept down. Used for grazing.

PLUMER DOMAIN.

Sections Nos. 11, 12, and 20, Plumer Hamlet, Parish of Waipareira. Area, 10 acres and 38 perches.

Work done during year: 5 acres laid down in grass. Improvements now on domain: Fencing, seats, and conveniences. Used for picnics. Proposed operations for ensuing year: Keeping noxious weeds in check.

POKENO DOMAIN.

Allotment No. 138 of Section No. 1, Pokeno Settlement, Opaheke Survey District, and Section No. 154, Maungatawhiri Parish. Area, 132 acres and 4 perches.

This domain is under the control of the Commissioner of Crown Lands, Auckland. It consists of steep and broken land. Used for grazing. Leased on a year-to-year tenancy, the lessee being required to eradicate noxious weeds.

PUHOI DOMAIN.

Section No. 130, Parish of Puhoi. Area, 3 acres

Nil report furnished.

PUKAPUKA DOMAIN.

Section No. 82A, Parish of Mahurangi. Area, 27 acres.

Portion of the domain is in grass. Used for grazing.

PUKEKARORO DOMAIN.

Section No. S. 79, Kaiwaka Parish. Area, 73 acres and 32 perches.

This domain is under the control of the Commissioner of Crown Lands, Auckland.

PUKEKOHE DOMAIN.

Allotment 5A of Suburban Section No. 2, Parish of Pukekohe. Area, 3 acres 3 roods 34 perches.

Nil report furnished.

PUNIU DOMAIN (PART OF).

Part of Section No. 223, Parish of Puniu. Area, 7 acres and 32 perches.

This domain is under the control of the Commissioner of Crown Lands, Auckland. Improvements now on domain: Fencing, ploughing, clearing, and grassing.

PUNIU DOMAIN (PART OF).

Section No. 54A, and Allotments Nos. 6 and parts of 5, 7, and 8 of Section No. 236, Mangapiko Parish. Area, 15 acres and 20 perches.

Work done during year: General maintenance, concrete tank and windmill erected, new gates erected and old ones repaired and painted, fencing, seats painted, fences trimmed, flower-beds kept in good order, and pavilion repaired. Improvements consist of fencing, plantations, pavilion, band-rotunda, cast-iron seats, summer and winter bowling-greens, tennis-courts, croquet-lawns, and athletic track. Used for general recreation. Proposed operations for ensuing year: Planting ornamental trees, painting pavilion, and general maintenance. It is proposed to hand over the control of the domain to the Te Awamutu Town Board.

RAGLAN DOMAIN.

Lots 6, 8, and 9 of Section No. 14, Town of Raglan. Area, 1 acre 1 rood 5 perches.

There was no response to tenders called for a lease of the domain. It is proposed to make another effort to lease the area on improvement conditions.

RANGIRIRI DOMAIN.

Section No. 1A, Suburbs of Rangiriri. Area, 2 acres 2 roods.

This domain is under the control of the Commissioner of Crown Lands, Auckland. There is a spring on the area. Used for grazing. The lessees are required to eradicate noxious weeds.

RANGITOTO ISLAND DOMAIN.

Area, 5,698 acres 2 roods of Rangitoto Island, situated in Rangitoto Survey District.

Work done during year: Rough footpath constructed to Islington Bay; footpath leading to newly discovered caves blinded; and track to summit renewed, and overgrowth cut back.

Improvements now on domain: Two shelter-sheds, four concrete tanks, seats, fireplaces, a well-defined and graded path to summit of mountain and one leading towards Islington Bay, and recreation-ground. Used as a pleasure resort. Proposed operations for ensuing year: Completing footpath to Islington Bay, repairing existing footpaths, and general maintenance. The island is ofttimes spoken of as the sentinel of Auckland Harbour, and is by its position and natural configuration adapted for a scenic and pleasure resort. The discovery of fine caves on the island has had the effect of considerably increasing the number of visitors. During the summer months steamers run frequent excursions to the island.

RAUPO DOMAIN.

Sections Nos. 58, Block XVI, Tokatoka Survey District, and 1, 2, 15, and 16, Village of Raupo. Area, 37 acres 2 roods 28 perches.

Arrangements have been made with the lessee to share the cost of an artesian well. It is proposed to fence the Raupo Reserve when funds are available. Improvements consist of boundary-fences and small drain. Used for occasional picnics. Leased.

RAWENE DOMAIN.

Allotments Nos. 153 to 166, Town of Rawene, and 106 to 111, Suburbs of Rawene. Area, 19 acres 2 roods 25 perches.

It is proposed to fence and improve that portion of the domain situated in the township, and to lease the area in the suburbs.

TAKAHUE DOMAIN.

Section No. 6A, Block XV, Takahue Survey District. Area, 4 acres 1 rood 27 perches.

This domain is under the control of the Commissioner of Crown Lands, Auckland. Arrangements are being made to lease the area.

TAKAPUNA DOMAIN.

Section No. 250, Takapuna Parish. Area, 180 acres 2 roods.

The domain commands a splendid view of Hauraki Gulf, and is visited by camping parties. The Takapuna tramways now run to within a mile of the domain.

TANEATUA DOMAIN.

Section No. 11, Block IX, Whakatane Survey District. Area, 10 acres.

Work done during year: Concrete cricket-pitch laid down. Improvements now on domain: Fencing, gates, grassing, barberry hedge, tennis-courts, cricket-pitch, and bowling-green. The tennis and bowling clubs have done extensive improvements, including the erection of windmills and pavilions. Used for football, cricket, tennis, bowls, sports, and general recreation. Leased.

TANGIHUA DOMAIN.

Section No. 33, Block II, Tangihua Survey District. Area, 65 acres.

Improvements now on domain: Fencing, draining, and grassing. Used for grazing.

TAUHOA DOMAIN.

Sections Nos. 145, 146, and 148, Tauhoa Parish, and 2A and 10B, Block XVI, Otamatea Survey District. Area, 111 acres 3 roods 30 perches.

The improvements on the domain consist of fencing, ploughing, and grassing. Part is used for lawn-tennis. The area is leased, the lessees being required to effect permanent improvements to the value of £1 per acre.

TAUMARUNUI AND RANGAROA DOMAIN.

Section No. 1, Block X, Town of Taumarunui; Section No. 9, Block V, Rangaroa Village; and Section No. 3, Block XIII, Tuhua Survey District. Area, 146 acres 2 roods 18 perches.

Work done during year: Water laid on to grounds, tea-tree cleared, and drains opened up and cleared. Improvements now on domain: Fencing, 19 chains of drains, water laid on, and band-rotunda. Used for sports and general recreation. Portion leased. Proposed operations for ensuing year: General improvements.

TAUPIRI DOMAIN.

Sections Nos. 78 to 87, Town of Taupiri. Area, 4 acres 2 roods 38 perches.

Work done during year: Noxious weeds kept down and fences kept in order. Improvements now on domain: Fencing, and trees around boundary. Used for picnics and sports. Proposed operations for ensuing year: General improvements to grounds.

TAUPO DOMAIN.

Sections Nos. 2 and 3, Block XXXIV, and 1, Block XXXV, Town of Taupo; and Section No. 2 and part of 4, Block II, Tauhara Survey District. Area, 25 acres 3 roods 26 perches.

Work done during year: General maintenance. Improvements now on domain: Fences, hedges, tool-house, three 400-gallon tanks, windmill, water-pipes, trough, lawn, well; tennis, bowling, and croquet green; golf-links, baths and bath buildings, and a carved memorial erected by the Natives of the district to their late chief. Used for croquet, bowls, tennis, and general recreation. Proposed operations for ensuing year: Repairing bath, building two concrete baths in place of the wooden ones now existing, and generally substituting concrete for wood wherever possible.

TAURANGA DOMAIN.

Allotments Nos. 273 and 393 of Section No. 1, Town of Tauranga. Area, 15 acres 3 roods 21 perches.

Work done during year: Pine-trees removed on west side of domain preparatory to planting shelter-hedge, new plantation of flowering-shrubs made, and ornamental trees and palms planted. The tennis club converted the sand court to grass, and an iron fence was erected on the western side of tennis and croquet lawns. Improvements now on domain: Cricket pavilion, band-rotunda, football pavilion, tennis-courts and pavilion, bowling-green, plantations, and fences. Used for athletic sports, cricket, tennis, croquet, bowls, and football. Proposed operations for ensuing year: Planting evergreen hedge along top of western cliff, keeping plantations clean, trimming hedges, repairing fences, and re-erecting fence between football and cricket grounds.

TAURANGA RACECOURSE DOMAIN.

Sections Nos. 22, 23, 24, and 25, Te Papa Parish. Area, 200 acres.

Work done during year: Racecourse fenced, ploughed, levelled, and resown in grass; new saddling-paddock and lawn enclosure formed; judge's box, stewards' stand, totalizator-house, luncheon-room, and bar erected; plantations cleared. Improvements now on domain: Fencing, booth and committee rooms, luncheon-room, totalizator-house, lawn, saddling-paddock, and plantations. Used for races and military manœuvres. Leased. Proposed operations for ensuing year: Constructing terraces and seats with covering-roof, to be used as a grandstand.

TE AROHA BRIDGE DOMAIN.

Sections Nos. 3, Block XVII; 2, Block XXI; Blocks XXII and XXIII; and Section 2, Block XXIV, Town of Te Aroha. Area, 7 acres 1 rood 6 perches.

Work done during year: Domain partly cleared for grassing, noxious weeds cut, swampy area partly drained, and fences repaired. Improvements now on domain: Fencing, draining, and grassing. Used for picnics and as a playground. Leased. Proposed operations for ensuing year: Clearing and laying down level portion in permanent grass.

TE AWAMUTU DOMAIN.

Sections Nos. 20, 21, 23, 24, 25, 81, 149, and 150, Town of Te Awamutu. Area, 18 acres 3 roods.

Improvements now on domain: Fencing, drains, and plantations. Leased.

TE PUKE DOMAIN.

Section No. 50, Block II, Maketu Survey District. Area, 13 acres 3 roods 4 perches.

Work done during year: 12 acres ploughed for laying down in permanent pasture. Improvements now on domain: Fencing, hedge, ornamental trees, tennis-courts, and sheds. Used for sports, picnics, and tennis. Leased.

TE TEKO DOMAIN.

Section No. 115, Matata Parish. Area, 70 acres 2 roods.

This domain is under the control of the Commissioner of Crown Lands, Auckland.

TITIRANGI DOMAIN.

Section No. 1, Titirangi Parish. Area, 23 acres.

Negotiations have been completed for a road to give access to the domain, and the road has been dedicated. Proposed operations for ensuing year: Fencing and forming road.

TOKATOKA DOMAIN.

Sections Nos. 57, 71, 72, 73, 90 to 97, 98 to 100, 109 to 111, 112 to 114, and 116, Town of Tokatoka. Area, 38 acres 2 roods 19 perches.

Improvements now on domain: Fencing, 10 acres grassing, and shelter-shed. Used for sports, picnics, and grazing. Portion leased. Proposed operations for ensuing year: Clearing and tree-planting

TOTARA DOMAIN.

Section No. 15, Totara Parish. Area, 4 acres 1 rood 5 perches.

Improvements now on domain: Embankment and drains. Used for sports.

TUAKAU DOMAIN.

Section No. 45, Tuakau Parish, Block IV, Onewhero Survey District. Area, 37 acres 1 rood 39 perches.

Work done during year: Hedges trimmed. Improvements now on domain: Fences, plantations, tennis-courts, and six garden seats. Used for picnics and military reviews. The domain is leased. It is proposed to plant a belt of deciduous trees round the boundary.

TUI PARK DOMAIN.

Sections Nos. 14A and 14B, Block IX, Aroha Survey District. Area, 110 acres and 20 perches.

Used for picnics. The area contains some very fine bush.

TUPUA DOMAIN.

Section No. 119, Whangarei Parish. Area, 10 acres.

Improvements now on domain: Fencing, roads, and grassing. There are several mineral springs on the domain. Used for grazing.

TURANGA DOMAIN.

Wade's Island, Section No. 133, Pakuranga Parish. Area, 26 acres.

This domain is under the control of the Commissioner of Crown Lands, Auckland. It is an island in Turanga Creek.

URETARA ISLAND DOMAIN.

Uretara Island (Section No. 284, Waimana Parish). Area, 181 acres.

This domain is under the control of the Commissioner of Crown Lands, Auckland. It contains some fine native bush, and is leased to a person who also acts as caretaker.

URITAWA DOMAIN.

Sections Nos. 15 to 29 and 38 to 42, and portions of closed streets, Town of Waterford. Area, 5 acres 1 rood 24 perches.

Proposed operations for ensuing year: Erecting wire-netting fence about half a chain inside present fence, so as to graze the ground and thoroughly protect trees and shrubs; also a building for a public library. Improvements now on domain: Fencing, entrance-gates, shelter-trees, flagstaff, tennis-court, football and cricket grounds, shelter-shed, and dressing-rooms. Used for sports, picnics, tennis, and football.

WAHAROA DOMAIN.

Sections Nos. 26 and 27, Waharoa Township. Area, 10 acres.

Work done during year: Live hedge planted round three sides of the domain; picket fence, gate, and footbridge erected on front entrance; grass top-dressed with basic-slag; shrubs planted; and eastern boundary fence thoroughly repaired. Improvements now on domain: Fencing, gate, footbridge, drains, grassing, and planting. Leased for grazing. Proposed operations for ensuing year: Planting hedge, trees, and shrubs, and painting picket fence and gate.

WAIHARARA DOMAIN.

Section No. 8, Block V, Opoe Survey District. Area, 20 acres 3 roods 26 perches.

Under the control of the Commissioner of Crown Lands, Auckland. A Domain Board will, however, probably be appointed.

WAIHI DOMAIN.

Section No. 4, Block IV, Aroha Survey District. Area, 120 acres.

Improvements now on domain: Fences, hedge, and grassing. The license of the Waihi Jockey Club having been cancelled, the lease held by the club over the domain will be determined.

WAIHOU DOMAIN.

Sections Nos. 113, Block IX, and 8, Block XI, Aroha Survey District. Area, 107 acres 1 rood.

Work done during year: About 14 acres ploughed and sown in grass, 10 chains of fencing erected, and crossing formed. Improvements now on domain: Show building, grandstand, picket and post-and-wire fences, and plantations. Used for shows, football, cricket, and hockey. Leased.

WAIKIEKIE DOMAIN.

Section No. 49, Waikiekie Parish. Area, 53 acres and 32 perches.

This domain is under the control of the Commissioner of Crown Lands, Auckland. It contains some native bush. Improvements now on domain: Fencing. Steps will be taken to offer the area for lease.

WAIKINO DOMAIN.

Section No. 51, Town of Waikino. Area, 12 acres and 30 perches.

Work done during year: 4 acres cleared and 8 ploughed, hedges and trees trimmed and cleaned, shelter-shed repaired and painted, gates painted, notice-boards and conveniences erected. Improvements now on domain: Cricket and football ground, concrete cricket-pitch, pavilion, fences, hedges, plantations, and gates. Used for sports, cricket, hockey, and football. Proposed operations for ensuing year: Levelling, manuring, and sowing 8 acres in grass; tree-planting and clearing.

WAIMAMAKU DOMAIN.

Section No. 3, Block VIII, Hokianga Survey District. Area, 117 acres and 20 perches.

Under the control of the Commissioner of Crown Lands, Auckland.

WAIMANA DOMAIN.

Section No. 22, Waimana Settlement, Block III, Waimana Survey District. Area, 5 acres 2 roods 16 perches.

Work done during year: Fences repaired. Improvements now on domain: Fencing. Used for cricket, football, and tennis. Proposed operations for ensuing year: Erecting fences and pump, and planting live hedge and trees.

WAIPU NORTH DOMAIN.

Section No. 195A, Parish of Waipu. Area, 21 acres.

Improvements now on domain: Grassing. Leased.

WAIRERE DOMAIN.

Section No. 9, Block XI, Wairere Survey District. Area, 46 acres 1 rood.

This domain is under the control of the Commissioner of Crown Lands, Auckland. Used for picnics. There is a beautiful waterfall on the domain.

WAIUKU DOMAIN.

Section No. 73, Waiuku Village. Area, 10 acres.

Work done during year: About 3 acres prepared for laying down in permanent grass, fences and pavilion repaired, and general maintenance. Improvements now on domain: Fencing, plantations, drains, pavilion, concrete cricket-pitch, and conveniences. Used for cricket, football, and hockey. Leased. Proposed operations for ensuing year: Sowing down prepared area in grass, and eradication of blackberries.

WAIWERA DOMAIN.

Sections Nos. 168, 169, 170, and 171, Waiwera Parish. Area, 12 acres 2 roods 9 perches.

Improvements now on domain: Fencing and ploughing. It is proposed to lease the domain on improvement conditions.

WHAINGAROA DOMAIN.

Sections Nos. 86 and 86A, Waipa Parish, and 139, Whaingaroa Parish. Area, 364 acres and 21 perches.

No work was carried out during the year. Improvements now on domain: House of about twenty rooms, with outbuildings, fencing, orchards, and plantations; ladies' and gentlemen's baths, with bath-house buildings. Used as a health resort. It is proposed to improve the ladies' baths, and also the road through the domain.

WHAKATANE DOMAIN.

Sections Nos. 285 and 286, Waimana Parish. Area, 40 acres 2 roods 18 perches.

Work done during year: Sweetbrier grubbed in blue-gum plantation; about 10 chains of live fence planted; blanks filled in ornamental plantation, and trees cleaned; new fence erected round tennis-court, and existing fences repaired. Improvements now on domain: Fencing, grassing, and plantations. Used for cricket, football, sports, picnics, and as a drill-ground. Portion leased. Proposed operations for ensuing year: General maintenance.

WHANANAKI DOMAIN.

Section No. 26, Block IX, Opuawhanga Survey District. Area, 28 acres 2 roods 32 perches.

Under the control of the Commissioner of Crown Lands, Auckland.

WHANGARIPO DOMAIN.

Section No. 10A, Parish of Pakiri. Area, 15 acres.

Work done during year: About 6 chains of fencing. Improvements now on domain: Fencing.

WHANGATEAU DOMAIN.

Section No. 156A, Omaha Parish. Area, 15 acres and 20 perches.

Work done during year: Earth carted on to low-lying portions; 1,060 ft. of piping laid for permanent water-supply. Improvements now on domain: Hall, piano, tanks, conveniences, ornamental trees, tennis court and shed, concrete cricket-pitch, open and tile drains, 2 acres of native bush, ploughing, grassing, and fencing. Used for sports, picnics, tennis, cricket, football, and grazing. It is proposed to continue filling-in operations.

WHARERE DOMAIN.

Section No. 7, Block II, Waihi South Survey District. Area, 51 acres 2 roods.

Improvements now on domain: Fencing, ploughing, grassing, and plantation. Proposed operations for ensuing year: Fencing and tree-planting.

WHATAPAKA DOMAIN.

Southern portion of Section No. 56, Waiau Parish. Area, 123 acres 2 roods.

Nil report furnished.

WHATATIRI DOMAIN.

Section No. 7, Block XIV, Purua Survey District. Area, 16 acres 2 roods.

This domain is under the control of the Commissioner of Crown Lands, Auckland.

WHATAWHATA DOMAIN.

Sections Nos. 71 to 78 (inclusive) and 81 to 88 (inclusive), Suburbs of Whatawhata. Area, 4 acres.

Work done during year: Land ploughed and cropped, trees planted, assistance given towards forming tennis-courts and erecting a pavilion. It is proposed to plough and grass several acres. When in order the domain will probably be used for cricket, football, tennis, &c.

HAWKE'S BAY LAND DISTRICT.

AWANUI DOMAIN.

Section No. 6, Awanui Township. Area, 2 acres and 28 perches.

This domain is under the control of the Commissioner of Crown Lands, Napier. No works have been undertaken. Used for picnics.

CLYDE DOMAIN.

Suburban Sections Nos. 4, 5, 10, and 11, Borough of Wairoa. Area, 8 acres.

Work done during year: Domain ploughed, disced, levelled, and sown in oats. Proposed operations for ensuing year: Sowing down domain in grass.

DANNEVIRKE DOMAIN.

Suburban Section No. 12, Town of Dannevirke. Area, 40 acres.

Work done during year: Back portion of domain ploughed, swimming-baths completed, and planting of trees and shrubs continued. Improvements now on domain: Caretaker's dwelling, grandstand, dressing-rooms, conveniences, concrete fence on High Street frontage and post-and-wire fences on other boundaries, gates, swimming-baths with all necessary conveniences and offices, hedges, trees, and garden plots. Used for cricket, football, hockey, and as a pleasure-ground. The Highland Society hold their annual sports on the domain. Proposed operations for ensuing year: Laying out shrubberies, erecting pagodas, removing old oval bank, fencing, and planting.

ELSTHORPE DOMAIN.

Section No. 36, Block VII, Oero Survey District. Area, 13 acres 2 roods.

Work done during year: Shelter-shed built. Improvements now on domain: Fencing, plantation, and shelter-shed. Used for sports. Leased.

FARNDON PARK DOMAIN.

Portion of Wakahu Block, Clive Survey District. Area, 20 acres.

Work done during year: Rustic seats placed under trees, and conveniences erected. Improvements now on domain: Fencing, trees, pavilion, copper, conveniences, rustic seats, horse-yard, and jetty. Used for sports, picnics, regattas, and military encampments. Leased.

FRASERTOWN DOMAIN.

Section No. 152, Town of Frasertown. Area, 31 acres 2 roods 14 perches.

Work done during year: Pavilion enlarged. Improvements now on domain: Fencing, grassing, tennis-court, pavilion, and conveniences. Used for cricket, football, tennis, picnics, and military manœuvres.

GISBORNE DOMAIN.

Section No. 218, Town of Gisborne. Area, 7 acres 1 rood 22 perches.

Work done during year: Dressing-shed erected and general maintenance carried out. Improvements now on domain: Hedges, grassing, pavilion, entrance-gate, and dressing-sheds. Used for sports, cricket, football, and general recreation. Leased. Proposed operations for ensuing year: General maintenance.

HAMPDEN BUSH DOMAIN.

Sections Nos. 36 and 2 of 37, Block XII, Maraekakaho Survey District. Area, 105 acres 3 roods 28 perches.

Work done during year: Trees planted, noxious weeds kept down, and fences repaired. Improvements now on domain: Fencing, draining, and plantation. Used for grazing. Proposed operations for ensuing year: Fencing.

HAVELOCK DOMAIN.

Section No. 77, Block IV, Te Mata Survey District. Area, 4 acres 3 roods 10 perches.

Improvements now on domain: Gates, stiles, fencing, and plantations. Used for cricket, football, tennis, picnics, and as a children's playground.

KUMEROA DOMAIN.

Section No. 1, Block V, Town of Kumeroa. Area, 10 acres.

Work done during year: Running-track partially formed. Improvements now on domain: Fencing, plantation, pump and well. Used for grazing.

MAKARAKA DOMAIN.

Known as the "Government Paddock." Turanganui Survey District. Area, 48 acres.

Work done during year: General maintenance. Improvements now on domain: Fencing, hedge of ornamental trees, pavilion, conveniences, and water-supply laid on. Used for grazing. Proposed operations for ensuing year: Fencing, planting trees, and erecting a jetty.

MAKOTUKU DOMAIN.

Sections Nos. 13 and 66, Block IX, Takapau Survey District. Area, 23 acres 3 roods 18 perches.

Work done during year: Coronation oak fenced in, and four seats erected around it; seats and fence painted; shelter-trees planted and hedges trimmed. Improvements now on domain: Fencing, grassing, hedges, dressing-room, outbuildings, tennis-courts, concrete cricket-pitch, and well with pump. Used for general recreation. Proposed operations for ensuing year: Trimming hedges and painting entrance-gate.

MANGATOITOI DOMAIN.

Lot No. 5 of Section No. 5, Block VIII, Weber Survey District. Area, 46 acres and 3 perches.

This domain is under the control of the Commissioner of Crown Lands, Napier. Used for picnics.

MATAMAU DOMAIN.

Section No. 33, Village of Matamau. Area, 7 acres 2 roods.

Improvements now on domain: Fencing and grassing. Used for picnics.

MEANEE DOMAIN.

Section No. 2, Block VIII, Heretaunga Survey District (Meanee South). Area, 92 acres.

Leased for grazing.

MOTU DOMAIN.

Section No. 31, Block II, Motu Survey District. Area, 15 acres

The domain is at present covered with bush which contains milling-timber. It is proposed to sell the milling-timber and improve the domain with the proceeds.

NORSEWOOD DOMAIN.

Section No. 174, Block V, Takapau Survey District. Area, 5 acres 2 roods 33 perches.

Improvements now on domain: Fencing. Leased.

ORMOND DOMAIN (PART OF).

Suburban Sections Nos. 11 and 12, Town of Ormond. Area, 20 acres 2 roods 26 perches.

Work done during year: Fencing, paths formed, and ornamental trees and shrubs planted. Improvements consist of fences, drains, dwellinghouse, and plantations. The domain is used for general recreation. Proposed operations for ensuing year: Stumping and levelling, erecting seats, and general maintenance.

ORMOND DOMAIN (PART OF).

Section No. 82, Block I, Waimata Survey District. Area, 107 acres 1 rood 5 perches.

This domain is under the control of the Commissioner of Crown Lands, Napier. The area has been subdivided into seven lots, which are leased for terms of twenty-one years. Improvements now on domain: Three dwellings, outbuildings, cow-shed, yard, piggery, stable, trap-shed, fencing, and grassing.

ORMONDVILLE DOMAIN.

Block I, Town of Ormondville. Area, 15 acres 3 roods 20 perches.

Work done during year: Ground filled in, rolled, and grassed. Improvements now on domain: Pavilion, trees, shrubs, drains, and seats. Used for cricket, football, sports, and picnics. Leased for grazing. Proposed operations for ensuing year: Maintaining fences and buildings.

PAPAKURA DOMAIN.

Section No. 19, Block VIII, Heretaunga Survey District. Area, 39 acres 2 roods.

Leased for grazing.

PATUTAHI DOMAIN.

Section No. 81, Block I, Turanganui Survey District. Area, 61 acres and 22 perches.

Work done during year: Hedges trimmed, main entrance gravelled, swings erected, floor of shed reconcreted and copper and chimney built in, and stiles built leading to plantation. Improvements now on domain: Grandstand, dining-room, shelter-shed and conveniences, fencing, draining, ornamental plantations, swings, well, windmill, pump, water-trough, stiles, and track. Used for picnics and sports. Proposed operations for ensuing year: Improving recreation-ground, extending track and horse-paddock, painting grandstand and sheds, and general maintenance.

PATUTAHI TOWN DOMAIN.

Sections Nos. 17 to 20, 24 to 30, 65 to 76, and 102 to 113, and a closed road, Town of Patutahi. Area, 9 acres 1 rood 24 perches.

Work done during year: New gate, picket fence, and stile erected at entrance to hall, and gate and stile at domain entrance; domain fence strengthened, hall repaired, and ornamental trees planted. Improvements now on domain: Fencing, gates, hall, piano, furniture, outbuildings, ornamental trees and hedges. Used for football, hockey, sports, and grazing. Proposed operations for ensuing year: Improvements to hall and to domain.

PUKETITIRI DOMAIN.

Section No. 30, Block XIV, Pohui Survey District. Area, 11 acres 3 roods 16 perches.

Nil report furnished.

TE ARAI DOMAIN.

Section No. 21, Block V, Turanganui Survey District, Te Arai Settlement. Area, 12 acres and 26 perches.

Work done during year: Gates and picketing erected. Improvements now on domain: Fencing, 12¾ acres grassing, entrance-gates, and plantation. Leased for grazing. Proposed operations for ensuing year: General improvements.

TE ARAROA DOMAIN.

Section No. 21, Te Araroa Township. Area, 10 acres.

This domain is under the control of the Commissioner of Crown Lands, Napier. Used as a picnic resort.

TINIROTO DOMAIN.

Sections Nos. 8, 14, and 15, Tiniroto Village. Area, 4 acres.

This domain is under the control of the Commissioner of Crown Lands, Napier. Used for grazing and picnics.

UAWA DOMAIN.

Block III, Town of Uawa. Area, 25 acres and 32 perches.

Work done during year: Tree-planting. Improvements now on domain: Fencing, gates, pavilion, trees, and 5 acres levelled, subsoiled, and grassed for a recreation-ground. Used for cricket, tennis, football, and grazing. Proposed operations for ensuing year: Planting trees and erecting additions to pavilion.

VICTORIA DOMAIN.

Section No. 42, Block X, Woodville Survey District. Area, 23 acres 3 roods 10 perches.

Improvements now on domain: Fencing, draining, stumping, levelling, grassing, hedges and plantations planted, and entrance-gates. Used for sports. Leased. It is proposed to drain the wettest portions of the domain.

VIGOR BROWN DOMAIN.

Sections Nos. 5 and 133, Westshore, Napier. Area, 2 acres

The domain is used for football and picnics.

WAIPAWA DOMAIN.

Sections Nos. 16, 28, 29, and 30, Block XI, Waipukurau Survey District, and 105, Town of Waipawa. Area, 36 acres 1 rood 30 perches.

Work done during year: Approach formed to Lindsay Reserve and gate erected. Improvements now on domain: Fencing, levelling, and trees. Used for sports and picnics. A portion of the domain is leased.

WEBER DOMAIN.

Section No. 51, Block V, Weber Survey District. Area, 10 acres and 30 perches.

Work done during year: Trees planted and shed erected. Improvements now on domain: Shelter-shed, stumping, ploughing, grassing, draining, fencing, and planting Used for sports, football, and picnics. Proposed operations for ensuing year: Planting trees and erecting conveniences.

WHETUKURA DOMAIN.

Section No. 35, Whetukura Village. Area, 8 acres 1 rood.

This domain is under the control of the Commissioner of Crown Lands, Napier. Improvements now on domain: Fencing, grassing, and plantation. Used for picnics.

WOODVILLE DOMAIN.

Section No. 78, Block VIII, Woodville Survey District. Area, 39 acres 3 roods 19 perches.

Work done during year: Stumping and ploughing. Improvements now on domain: Dwelling-house and outbuildings, ploughing, stumping, draining, plantation, and hedges. Proposed operations for ensuing year: Ploughing, levelling, and laying down stumped ground in grass.

TARANAKI LAND DISTRICT.

Clifton Domain.

Section No. 71, Block VII, Waitara Survey District. Area, 66 acres.

Work done during year: 66 chains of fencing for the protection and preservation of the native bush erected by the lessee, and noxious weeds kept in check. The domain is under the control of the Commissioner of Crown Lands, New Plymouth. It is situated on the Onairo River, and contains some very beautiful native bush and an ancient Maori pa. Improvements now on domain: 20 acres grassing, and fencing. Local supervision is exercised by an honorary ranger. 20 acres leased.

Huiakama Domain.

Section No. 47, Block X, Ngatimaru Survey District. Area, 6 acres 2 roods 32 perches.

This domain is under the control of the Commissioner of Crown Lands, New Plymouth. It is all in grass, and is used for grazing. The road frontage is fenced.

Huirangi Domain.

Sections Nos. 138 to 142, 152 to 156, and 166 to 175, Town of Huirangi. Area, 10 acres.

Leased. Improvements now on domain: Fencing and shelter-trees.

Huiroa Domain.

Block IV, Town of Huiroa. Area, 7 acres 2 roods.

This domain is under the control of the Commissioner of Crown Lands, New Plymouth. It is covered with forest, but some of the largest trees have been removed by sawmillers. The domain is fenced on the southern boundary, and is leased for a term of fourteen years.

Inglewood Domain.

Sections Nos. 73, 85, 135, 148, 162, 175, 185, 197, 204, 213, 218, 224, 228, 230, 330, 354, and western part of 385, Town of Inglewood, and 292 and part 181, Moa District, Block IV, Egmont Survey District. Area, 30 acres 1 rood 30·3 perches.

Work done during year: Pavilion painted, ornamental trees planted along Kurapete Stream, and fence erected to protect them. Improvements now on domain: Pavilion, cycling and running track, hockey, football, and cricket grounds, fencing, and plantations. Used for sports, football, hockey, cricket, and fire-brigade practices. Portion leased.

Kaiauai Domain.

Sections Nos. 162 to 182, Egmont Village. Area, 5 acres 1 rood.

This domain is under the control of the Commissioner of Crown Lands, New Plymouth. Blackberry was grubbed during the year. The domain is ring-fenced, and is in grass where the blackberry has been cleared. Leased for fourteen years.

Kaponga Domain.

Sections Nos. 29, 30, 31, 38, 39, 40, and 69, Kaponga Village. Area, 20 acres.

Work done during year: General maintenance. Improvements now on domain: Fencing, clearing, levelling, grassing, plantations, draining, and conveniences. Used for sports and general recreation. Leased.

Mahoe Domain.

Section No. 16, Town of Whangamomona. Area, 2 acres 3 roods 30 perches.

This domain is under the control of the Commissioner of Crown Lands, New Plymouth. It is covered with bush, and is traversed by the proposed Stratford–Ongarue Railway.

Makaka Domain.

Sections Nos. 1, 2, and 43, Block X, Kaupokonui Survey District. Area, 16 acres.

The domain is leased for grazing.

Manaia Domain.

Sections Nos. 7 to 11 and 18 to 22, Block XXVII, 1, 2, 3, 12, 13, and 14, Block XXVIII, Town of Manaia; and 83 and 84, Block VII, Waimate Survey District. Area, 38 acres.

Work done during year: Fencing, entrance-gates erected, and flowers and shrubs planted by the Beautifying Committee. Improvements now on domain: Fencing, gates, ornamental trees, flowers, and shrubs. Used for sports, picnics, and general recreation. Portion leased.

Mangamingi Domain.

Section No. 62, Mangamingi Suburban, Ngaire Survey District. Area, 8 acres 2 roods 36 perches.

This domain is under the control of the Commissioner of Crown Lands, New Plymouth. It is covered with mixed forest, which is protected. Improvements now on domain: Fencing. Leased.

Mangaroa Domain.

Suburban Section No. 35, Town of Mangaroa. Area, 13 acres and 20 perches.

Work done during year: Division fence erected, gates and stile erected, tennis-courts laid out, and pavilion built. Improvements now on domain: Fencing, ploughing, levelling, grassing, tennis-courts, and pavilion. Used for general recreation. Leased. Proposed operations for ensuing year: Fencing off an area of about 4 acres as a recreation-ground and planting trees.

MANUTAHI DOMAIN.

Part of Section No. 9, Manutahi Settlement, Hawera Survey District. Area, 3 acres 3 roods 2 perches.

Improvements now on domain: 25 chains fencing, two halls, grassing, and plantation. Leased.

MARSLAND HILL DOMAIN.

Sections Nos. 2340 and part of 2343, Town of New Plymouth. Area, 7 acres 3 roods 31 perches.

Improvements consist of boundary-fences, monuments, and shrubs. Used for recreation purposes.

MATIRE DOMAIN.

Suburban Section No. 32, Matire Village, Aria Survey District. Area, 6 acres and 12 perches.

Work done during year: Domain felled, burnt, and sown in English grasses. Proposed operations for ensuing year: Fencing. Leased.

MOUNT BRYON DOMAIN.

Situated in Town of New Plymouth. Area, 5 acres 2 roods.

Work done during year: Fencing and general maintenance. Improvements now on domain: Boundary-fences and shrubs. Used for general recreation.

OHAWE DOMAIN.

Sections Nos. 317, 318, 319, and 320, Town of Ohawe. Area, 3 acres 2 roods 15 perches.

Work done during year: 14 chains of fencing erected and boxthorn hedge planted along same; ornamental trees planted. Improvements now on domain: Fencing and planting. Used for picnics, camping, and accommodation-paddock for public visiting beach. Portion leased. Proposed operations for ensuing year: Clearing and renewing boxthorn hedge.

ONAIRO DOMAIN.

Section No. 8, Block III, Waitara Survey District. Area, 6 acres.

This domain is under the control of the Commissioner of Crown Lands, New Plymouth. It is situated near the mouth of the Onairo Stream on the main road between Waitara and Urenui, is in rough grass, and is used for grazing and as a picnic resort. Improvements now on domain: Fencing. Leased, the tenant being required to keep down noxious weeds.

OPUNAKE DOMAIN.

Blocks I, IV, V, VI, VIII, and Sections Nos. 1 to 6, Block II, Town of Opunake, and the Opunake Town Belt. Area, 35 acres 2 roods 2 perches.

Work done during year: Fences repaired, hedges, ditches, and plantations kept in order, and general maintenance. Improvements now on domain: Fencing, gates, grandstand with luncheon-rooms, ornamental trees, and drains. Leased.

PATEA DOMAIN.

Blocks XLIV and XLV, Town of Patea. Area, 65 acres 2 roods 25 perches.

Work done during year: King George V drive completed, trees and stumps grubbed, 400 yards of permanent hedge planted, 3,000 cuttings struck for planting in winter, considerable drainage operations carried out to reclaim valuable land, grandstand and gates repaired and painted, and general maintenance. Improvements now on domain: Fencing, cricket and football ground, tennis-court, nursery garden, half a mile of paths, two cart gates, seven small gates, three stiles, grandstand, pavilion, tool-house, and custodian's room. Used for football, tennis, cricket, hockey, picnics, and public recreation. Portion leased.

PIHAMA DOMAIN.

Section No. 48, Block I, Pihama Village, Oeo Survey District. Area, 14 acres 2 roods.

Work done during year: Fencing renewed, gate, water-tank, and convenience erected. Improvements now on domain: Fences, bowling-green, tennis and croquet lawns, shelter-sheds, windmill and water-supply. Used for sports, picnics, football, and general recreation. Portion leased. Proposed operations for ensuing year: General maintenance.

POTI DOMAIN.

Section No. 83, Block X, Ngaire Survey District. Area, 15 acres 2 roods.

Improvements now on domain: Fencing and grassing. Leased for grazing.

PUKEARUHE DOMAIN.

Sections Nos. 1, 2, 3, 4, 5, 6, 13, 14, 15, 25, 26, 27, 28, 29, and 30, Town of Pukearuhe, and 2 and 9, Pukearuhe Town Belt. Area, 28 acres 2 roods

Under the control of the Commissioner of Crown Lands, New Plymouth.

PUNEHU DOMAIN.

Sections Nos. 1, 2, 5, 6, and 41, Village of Punehu. Area, 7 acres.

During the year shrubs were cleaned and additional ones planted. Improvements now on domain: Fencing, barberry hedge, draining, and shrubs. It is proposed to stump, plough, and grass 1 acre, and to excavate 3 chains of drain.

PUNIWHAKAU DOMAIN.

Section No. 23, Puniwhakau Village. Area, 1 acre 3 roods 6 perches.

This domain is under the control of the Commissioner of Crown Lands, New Plymouth. Leased for a term of fourteen years, the lessee being required to keep down noxious weeds.

PURANGI DOMAIN.

Section No. 2, Block II, Ngatimaru Survey District. Area, 10 acres.

Improvements now on domain: Grassing. Used for picnics. Proposed operations for ensuing year: Fencing. Leased.

RAHOTU DOMAIN.

Sections Nos. 45 and 105, Block I, Opunake Survey District. Area, 48 acres 2 roods 11 perches.

Work done during year: General maintenance. Improvements now on domain: Fencing, dressing-rooms, lean-to, four-roomed dwelling, stand platform, sports-ground, and plantation. Used for sports, football, cricket, and picnics.

ROTOKARE DOMAIN (NGAIRE).

Rotokare Lake (44 acres) and Section No. 1, Block XII, Ngaire Survey District. Area, 574 acres.

This domain is under the control of the Commissioner of Crown Lands, New Plymouth. During the year the boundary-fence was repaired and barberry hedge weeded. Improvements now on domain: Boundary-fences. The area contains the Rotokare Lake. Not generally used. Mr. W. M. Humphreys, of Eltham, is honorary ranger for this domain.

ROTOKARE DOMAIN (PARITUTU).

Part of Native Reserve No. 2 (Arapepe), Block VIII, Paritutu Survey District. Area, 48 acres.

This domain is under the control of the Commissioner of Crown Lands, New Plymouth. Work done during year: Noxious weeds kept in check. Improvements now on domain: Boundary-fences and fence round native bush. Leased for grazing; also used for picnics.

RUKUHIA DOMAIN.

Section No. 5, Block III, Totoro Survey District. Area, 29 acres 3 roods.

Under the control of the Commissioner of Crown Lands, New Plymouth.

ST. HELEN'S DOMAIN.

Suburban Section No. 1, Aria Village, Block X, Totoro Survey District. Area, 38 acres 2 roods.

Work done during year: 13 acres of tea-tree cut, stumped, and ploughed. Improvements now on domain: Fencing, draining, ploughing, and grassing. Used for sports. Leased.

STRATFORD DOMAIN.

Sections Nos. 24 to 33, 36 to 38, 67 to 76, 79 to 81, 111 to 124, 150 to 163, 470 to 484, 509 to 518, 542 to 551, 574 to 581, 607 to 619, 639 to 651, 781, 858, 935, and 936, Town of Stratford, and 28, Block I, Ngaire Survey District. Area, 83 acres 1 rood 2 perches.

Work done during year: Fern and scrub cleared and burned so as to minimize the risk of fires, plantations thinned, trees and hedges trimmed, fences repaired, and bridge overhauled and repaired. Improvements now on domain: Fencing, plantations, running and cycling track, football and hockey grounds, suspension bridge, seats, and paths. Used for athletic sports, football, cricket, hockey, picnics, band-concerts, and promenade. A portion of the domain is leased. Proposed operations for ensuing year: Planting and extending walks. Permission has been granted to tennis clubs to lay down courts on the domain.

TARATA DOMAIN.

Section No. 58, Tarata Village. Area, 8 acres 2 roods.

Improvements now on domain: Sheep-proof fence, two tennis-courts, pavilion, running-track, and plantation. Leased.

TATU DOMAIN.

Section No. 2, Tatu Suburban, Ohura Survey District. Area, 10 acres.

Improvements now on domain: Felling, grassing, and stumping. Used for sports and picnics. Proposed operations for ensuing year: Fencing and clearing.

TAUMATA DOMAIN.

Subdivision No. 1 of Section No. 12, Block X, Ngaire Survey District. Area, 11 acres.

Work done during year: Grandstand repaired and painted, and general maintenance. Improvements now on domain: Grandstand, refreshment-rooms, auxiliary grandstand, trees, native bush, hedges, fences, picket fence, and sports-ground. Used for sports, picnics, and general recreation. Proposed operations for ensuing year: Erecting a cottage, protecting river-bank, and general maintenance.

TE NGUTU-O-TE-MANU DOMAIN.

Section No. 40, Block XVI, Kaupokonui Survey District. Area, 50 acres.

Work done during year: Conveniences erected. Improvements now on domain: Fences, cottage, gates, pond, plantation, shrubs, shelter-trees, monument, tennis-court, conveniences, and water-service. Used for picnics and by tourists. A portion of the domain is leased.

TOKIRIMA DOMAIN.

Sections Nos. 23 and 39, Block XIV, Ohura Survey District. Area, 63 acres 2 roods 5 perches.

It is proposed to clear and improve about 5 acres by aid of public subscription.

TOKO DOMAIN.

Part of Section No. 36, and part of Subsection 1 and Subsection 2 of Section No. 36, Block III, Ngaire Survey District. Area, 7 acres and 32·7 perches.

Work done during year: Grounds top-dressed and maintained in good order, native trees planted in gully alongside the pavilion, and permanent fence erected to keep spectators off running-ground. Improvements now on domain: Fencing, trees and shrubs, bridge, gate, pavilion, running-track, and concrete cricket-pitch. Used for sports, picnics, cricket, and football. Leased for grazing sheep. Proposed operations for ensuing year: Filling in gully on eastern side of running-track.

TONGAPORUTU DOMAIN.

Section No. 23, Tongaporutu Village. Area, 4 acres 1 rood 24 perches.

This domain is under the control of the Commissioner of Crown Lands, New Plymouth It is fenced on the north-east and south-west boundaries, and is in fair grass. Leased.

TUTUTAWA DOMAIN.

Section No. 43, Mangaehu Suburban, Omona Survey District. Area, 6 acres 2 roods 34 perches.

The domain is partly fenced. It is proposed to clear the bush and form a sports-ground.

URENUI DOMAIN.

Section No. 12, Block III, Waitara Survey District. Area, 57 acres.

Work done during year: Sand-dunes reclaimed. Improvements now on domain: Fencing, draining, plantation, and swing bridge. Used for sports and picnics. 52 acres are leased. Proposed operations for ensuing year: Sowing reclaimed sand.

URUTI DOMAIN.

Section No. 8, Block II, Upper Waitara Survey District. Area, 10 acres 3 roods 16 perches.

Work done during year: Contract let for stumping and clearing. Improvements now on domain: Fencing, stumping, and clearing. Used for picnics and sports. Proposed operations for ensuing year: Ploughing, levelling, and sowing down stumped portion, and erecting fencing.

WAIMATE DOMAIN.

Section No. 78, Block VI, Waimate Survey District. Area, 13 acres 3 roods 2 perches.

The domain is used for picnics. Leased. Fences are being erected by lessee in lieu of rent.

WAIPUKU DOMAIN.

Sections Nos. 45, 47, 49, and 51, Waipuku Village. Area, 2 acres and 12 perches.

Work done during year: Prickly holly and ornamental trees planted and fences trimmed. It is proposed to plant a live fence and more ornamental trees. Used for grazing.

WAITARA DOMAIN.

Block No. 115, Town of Waitara. Area, 15 acres.

Improvements now on domain: Fences, hedges, dressing-shed, bowling-pavilion, and plantations. Used for sports, picnics, football, hockey, and bowls. Portion leased.

WAITEWHENA DOMAIN.

Section No. 2A, Block I, Ohura Survey District. Area, 5 acres 2 roods.

This domain is under the control of the Commissioner of Crown Lands, New Plymouth. 9 chains of fencing were erected during the year.

WAREA DOMAIN.

Sections Nos. 71, Block VIII, Cape Survey District, and 13 and 110, Warea Village. Area, 31 acres 3 roods 28 perches.

Work done during year: Fences repaired, noxious weeds cleared, new shelter-shed erected, and floor laid down in old shed. Improvements now on domain: Fencing, shed, and trees, in addition to an acre of native bush. Used for sports, picnics, tennis, cricket, and general recreation. Leased. Proposed operations for ensuing year: Levelling and general improvements.

Whangamomona Domain.

Section No. 25, Block I, Mahoe Survey District. Area, 4 acres 2 roods 1 perch.

Work done during year: New fence erected, eleagnus hedge planted, ground partly cleared, gullies piped, and running-track cut out. Improvements now on domain: Live hedge protected by double-wire fence, 1 chain pipe drain, and gully partly filled in. Used for sports, cricket, football, golf, and hockey. Proposed operations for ensuing year: Levelling, clearing, and draining ground to form playing-area suitable for sports, &c., and planting ornamental trees.

WELLINGTON LAND DISTRICT.

Alfredton Domain.

Sections Nos. 201, Block XII, Mangaone Survey District, and 234, Town of Alfredton. Area, 116 acres 1 rood 20 perches.

Work done during year: Four seats procured, convenience erected, minor improvements effected to shed, concrete cricket-pitch laid down, plantations surveyed, and Section No. 234 subdivided. Improvements now on domain: Fencing, box and pipe drains, shed and fixtures, seats, enclosures, and trees. Used for sports, picnics, cricket, and football. Portion leased. Proposed operations for ensuing year: Erecting swings and see-saw, and planting trees.

Apiti Domain.

Sections Nos. 41A and part 51, Block XI, Apiti Survey District. Area, 40 acres.

Work done during year: Small gate erected in front fence for foot traffic. Leased.

Ashhurst Domain.

Sections Nos. 463A and 463C, Block III, Gorge Survey District. Area, 46 acres 2 roods 11 perches.

Work done during year: Trees planted on domain and willows on river-bed, by-laws printed, and general maintenance. It is proposed to continue the planting of trees. Improvements now on domain: Fencing, gates, large shed for picnic parties, and about half an acre of young plantation. Used largely for picnics and general recreation.

Bull's Domain.

Parts of Sections Nos. 4 and 5, Block XI, Rangitoto Survey District. Area, 46 acres 2 roods 9 perches.

Work done during year: Gorse grubbed, trees trimmed, and waterhole cleaned. Improvements now on domain: Portion levelled and planted with shelter and ornamental trees, hockey and football grounds formed and fenced, one asphalt and one concrete tennis-court. Used for sports, picnics, rifle shooting, football, hockey, and tennis. 40 acres leased for grazing. Proposed operations for ensuing year: General maintenance, grubbing gorse, and eradicating noxious weeds.

Bunnythorpe Domain.

Sections Nos. 1501 to 1504, Town of Bunnythorpe, and 67, 68, 69, part 72, and 82, Town of Mugby Junction. Area, 49 acres and 37 perches.

Work done during year: Small pavilion built on tennis-court, conveniences erected, and plantations kept in order. Improvements now on domain: 3 acres of plantations; recreation-ground planted, fenced, and drained; two asphalt tennis-courts, conveniences, and running and cycling track. Used for sports, picnics, cricket, football, and tennis. 44 acres 3 roods 23 perches leased for dairying. Proposed operations for ensuing year: General maintenance.

Eketahuna Domain.

Section No. 40D and Lot 1 of Section No. 40, Block VI, and Sections Nos. 156 and 157, Block X, Mangaone Survey District; Suburban Sections Nos. 182, 183, and 185, Town of Parkville; and Section No. 33, Block V, Mangaone Survey District. Area, 62 acres 2 roods 22 perches.

Work done during year: Swing-bridge reserve planted with trees, and conveniences erected. A carnival held to raise funds for a pavilion realized £84. Improvements now on domain: Fencing, draining, plantation, running-track, paths, and seats. Used for sports, picnics, and shows. A portion of the domain is leased. Proposed operations for ensuing year: Further planting, and, if funds permit, the erection of a pavilion.

Featherston Domain.

Section No. 338, parts of Sections Nos. 152, 116, and 123, and Suburban Section No. 122, Town of Featherston, and the Featherston Town Reserve. Area, 88 acres and 5 perches.

Work done during year: Trees cleaned, hedges trimmed, gorse grubbed, paths cleared, and trees planted. Proposed operations are on the same lines. Improvements now on domain: Shed, tables, band-rotunda, seats, grandstand, tennis-pavilion, fencing, and plantation. Used as a pleasure resort.

FEILDING DOMAIN.

Lot 7 and part of Lot 8 of Section No. 149, Town of Sandon. Area, 9 acres 2 roods.

Work done during year: The sum of £250 was raised by the citizens, and is being expended in laying out flower-beds, putting down asphalt footpaths, improving the fish-pond, planting trees and shrubs, and general improvements. The borough gardener gives the domain a good deal of attention. The whole reserve has been fenced, and on the South Street frontage has been erected a picket fence, with substantial entrance-gates and approaches. The domain is used for football, cricket, sports, picnics, and general recreation. Proposed operations for ensuing year: A domain fête will be held to raise funds for further improvements, to consist of draining, planting, fencing, erecting seats, and making paths through the native bush.

GORGE DOMAIN.

Sections Nos. 26 and 27, Block I, Mangahao Survey District. Area, 100 acres 3 roods.

Work done during year: Tracks cleared through bush and three fireplace-shelters erected. Used principally as a picnic-ground. Proposed operations for ensuing year: Fencing, clearing tracks, eradicating noxious weeds, and clearing a portion for a recreation-ground.

HASTWELL DOMAIN.

Section No. 64, Block XIV, Mangaone Survey District. Area, 12 acres 1 rood 24 perches.

Work done during year: 4¼ acres ploughed, disced, and harrowed preparatory to sowing down in grass. Proposed operations for ensuing year: Planting trees and sowing prepared area in grass.

HOROPITO DOMAIN.

Sections Nos. 4 to 15, Block XIV, Town of Horopito West. Area, 15 acres 2 roods 35 perches.

This domain is under the control of the Commissioner of Crown Lands, Wellington.

HOROWHENUA LAKE DOMAIN.

Horowhenua Lake (951 acres), Subdivision 38 and part Subdivision 39, Horowhenua 11B Block. Area, 964 acres 3 roods 37 perches.

Improvements now on domain: Fencing, gates, roads, and drains. Used for boating, sports, and picnics.

HUNTERVILLE DOMAIN.

Sections Nos. 9, 10, 17, 18, 25, 26, 33, 54, 155, 156, 157, 158, 159, 160, 161, 163, and 178, Town of Hunterville. Area, 20 acres 1 rood 38·6 perches.

Work done during year: New entrance-gates erected, buildings painted, and hedges cut and put in order. Improvements now on domain: Fencing, draining, refreshment-booth, seats, grassing, and tennis and croquet lawns. Used for sports, cricket, football, tennis, croquet, and general recreation. A portion of the domain is leased. Proposed operations for ensuing year: Cutting hedge, fencing, and further improving recreation-ground.

ISLAND BAY DOMAIN.

An irregularly shaped island situated in Block XI, Port Nicholson Survey District. Area, 8 acres.

Nil report furnished.

KAITIEKE DOMAIN.

Suburban Section No. 2, Town of Kaitieke. Area, 10 acres 1 rood 8 perches.

This domain is under the control of the Commissioner of Crown Lands, Wellington.

KAKAHI DOMAIN.

Section No. 12, Block VI, Hunua Survey District. Area, 20 acres 3 roods 22 perches

Under the control of the Commissioner of Crown Lands, Wellington.

KARIOI DOMAIN.

Section No. 1, Block VI, Karioi Survey District. Area, 102 acres 3 roods.

Domain Board appointed in October, 1912. Fencing and draining will be carried out when funds are available.

KHANDALLAH DOMAIN.

Allotments 2 and 3 of Sections Nos. 1 and 2, Block XI, Belmont Survey District. Area, 31 acres 1 rood.

Work done during year: New track made and existing one extended, swing gate and seats erected, and general improvements. Improvements now on domain: Fencing, paths, 3 chains water-piping, gates, seats, and three fireplaces. Used for picnics and scenic purposes. Proposed operations for ensuing year: General maintenance.

KIMBOLTON DOMAIN.

Sections Nos. 92B and 92C, Block XIII, Apiti Survey District, and Suburban Section No. 16, Town of Kimbolton. Area, 63 acres 3 roods 10 perches.

A portion of the domain is leased.

KOHINUI DOMAIN.

Section No. 23c, Block I, Makuri Survey District. Area, 10 acres.

Improvements now on domain: Fencing and clearing. Leased.

LANGDALE DOMAIN.

Suburban Sections Nos. 11, 12, 15, and 16, Town of Langdale, and a Closed Road in the Town of Langdale. Area, 26 acres 2 roods 2·8 perches.

Work done during year: Hall painted. Improvements now on domain: Hall, grandstand and booth, fencing, and two plantations. Used for sports and picnics.

LEVIN DOMAIN.

Section No. 21, Block I, Waiopehu Survey District. Area, 41 acres 1 rood 3 perches.

Work done during year: General maintenance. Improvements now on domain: Fencing, planting, and draining. Used chiefly for grazing and picnics. Leased.

LEVIN PARK DOMAIN.

Section No. 24, Suburbs of Levin, Block I, Waiopehu Survey District. Area, 11 acres.

Work done during year: Oval top-dressed and water laid on from high-pressure supply, oval fence repaired, trees trimmed, dressing-shed re-erected, and general maintenance. Improvements now on domain: Fenced oval, cricket-pitch, dressing-shed, belt of trees, swimming-baths, and 42 chains fencing. Used for sports, games, and picnics. Proposed operations for ensuing year: General maintenance and improvements.

MAKAIRO DOMAIN.

Section No. 47, Makairo Village Settlement, Makuri Survey District. Area, 5 acres.

This domain is under the control of the Commissioner of Crown Lands, Wellington. Improvements now on domain: Felling, grassing, stumping, fences, drains, and plantation. Used for grazing.

MANGATAINOKA DOMAIN.

Sections Nos. 79, Pahiatua Village Settlement, and 30, 31, and 32, Mangatainoka Village Settlement. Area, 24 acres 2 roods 5 perches.

Work done during year: Fences and buildings kept in repair. Improvements now on domain: Fences, plantations, running-track, grandstand, shelter-sheds, store-room, conveniences, tank, and hurdles. Used for sports, football, cricket, and picnics. Leased. Proposed operations for ensuing year: General maintenance.

MANGAWEKA DOMAIN.

Sections Nos. 3, 4, 5, 6, 7, 8, 9, 10, and 11, Block II, 69, 71, 73, 75, 77, 99 to 104, and 1, Block IX, Town of Mangaweka; 22, 55, 56, and 57, Suburbs of Mangaweka; and 50 and 52, Block X, Hautapu Survey District. Area, 83 acres 1 rood 28 perches.

Improvements now on domain: Fencing, tennis-court, building, and plantations. Used for sports and picnics. A portion of the domain is leased. Proposed operations for ensuing year: Repairing fences, erecting 6 chains of picket and 3 of wire fencing, erecting gates and footbridge, and planting and protecting trees.

MANUNUI DOMAIN.

Sections Nos. 15 and 140, Town of Manunui. Area, 62 acres and 16 perches.

Work done during year: Gates erected. Improvements now on domain: Fencing and gates. Used for sports, picnics, and as a pleasure resort. Leased on improvement conditions.

MARIMA DOMAIN.

Section No. 58, Block X, Mangahao Survey District. Area, 22 acres.

Work done during year: 3½ acres stumped for a recreation-ground. Improvements now on domain: Fencing, stumping, tree-planting, and gates. Used for grazing. Proposed operations for ensuing year: Fencing recreation-ground.

MATAROA DOMAIN.

Sections Nos. 1 to 6, and 16, Suburbs of Mataroa. Area, 10 acres 2 roods 10 perches.

Improvements now on domain: Fences and shed. Used for football and picnics.

MAUNGARAKI DOMAIN.

Subdivisions Nos. 6 and 8A, Maungaraki Block, and Block VIII, Belmont Survey District. Area, 107 acres 2 roods 20 perches.

It is proposed to cut a track to define the boundary and to clear noxious weeds. Used as a camping-ground for picnic parties.

MOWHANAU DOMAIN.

Sections Nos. 18, 66, and 70, Mowhanau Village. Area, 12 acres 1 rood 3 perches.

Work done during year: Post-and-wire fence erected on edge of cliff, existing fences repaired, gorse and noxious weeds grubbed, and paths put in order. Improvements now on domain: Fencing, draining, and plantations. Used for picnics, camping, and bathing. Proposed operations for ensuing year: Planting trees and repairing fences.

NEWMAN DOMAIN.

Suburban Sections Nos. 30 and 115, Town of Newman. Area, 26 acres and 24 perches.

Work done during year: Fencing, planting, and clearing of shrubbery. Improvements now on domain: Felling, stumping, ploughing and grassing, fencing, shrubs, trees and hedge, conveniences, shed with copper inserted, and tables and seats. Used for sports and picnics. Leased for grazing. Proposed operations for ensuing year: Levelling and planting.

NUKUMARU DOMAIN.

Sections Nos. 63 and 66, Block XIII, Nukumaru Survey District, and 67, 71, and 71A, Block XIV, Wairoa Survey District. Area, 1,220 acres.

Work done during year: Cottage erected. Improvements now on domain: Fencing, trees, and grassing. Used for picnics and by fishing parties.

OHAKUNE LAKES DOMAIN.

Section No. 24C, Block VIII, Makotuku Survey District. Area, 96 acres 1 rood.

Improvements now on domain: Fencing. Used for picnics and grazing. Leased. Proposed operations for ensuing year: Draining swamp and general improvements.

OKOTUKU DOMAIN.

Sections Nos. 338 and 140, Block VII, Wairoa Survey District. Area, 159 acres 3 roods 33 perches.

Work done during year: Fences repaired, trees planted, and general maintenance. Improvements now on domain: Buildings, fencing, plantation, grassing, water-supply, and rifle range. Used for picnics, military encampments and tournaments, and rifle shooting. Leased. Proposed operations for ensuing year: Planting trees and top-dressing grass paddocks.

ORAUKURA DOMAIN.

Section No. 65, Block XIV, Ohinewairua Survey District. Area, 9 acres 2 roods.

This domain is under the control of the Commissioner of Crown Lands, Wellington. Leased. All in grass and in good order.

OTAKI DOMAIN.

Part of Haruatai No. 11 Block, Block IX, Waitohu Survey District. Area, 6 acres and 17 perches.

Work done during year: Fences repaired, weeds kept down, and 400 trees planted. Improvements now on domain: Fencing, grassing, and plantations. Used for sports.

OWHANGO DOMAIN.

Sections Nos. 5 to 16, Block III, and 5 to 16, 21, 22, and 23, Block IV, Town of Owhango; and 47, Block X, Hunua Survey District. Area, 15 acres and 16 perches.

Work done during year: Ploughing and scooping. Used for sports, picnics, football, and cricket. It is proposed to plough, scoop, and level the domain, at an estimated cost of £70.

PAHAUTANUI DOMAIN.

Section No. 115, Block IX, Paikakariki Survey District. Area, 105 acres 1 rood.

Work done during year: Trees planted. Improvements now on domain: Fencing, gates, drain, asphalt cricket-pitch, dressing-room, racing-track, and trees. Used for sports, cricket, and general recreation. A portion of the domain is leased.

PAHIATUA DOMAIN.

Situated in Block VIII, Mangahao Survey District. Area, 14 acres 3 roods.

Used for picnics, bathing, and general recreation. It is proposed to protect the domain from encroachments by the Mangatainoka River, at an estimated cost of £200.

PALMERSTON NORTH DOMAIN.

Sections Nos. 215, 220, and part of 214, Kairanga Survey District. Area, 13 acres.

Work done during year: Dead trees replaced, fences repaired, and plantation and native bush cleared. Improvements now on domain: Fencing, shelter-trees, and plantation. Used for grazing and as a scenic reserve. Proposed operations for ensuing year: Tree-planting and clearing.

PARAPARAUMU DOMAIN.

Section No. 5A, Block VIII, Paraparaumu Suburban. Area, 5 acres.

Work done during year: Docks eradicated, and seats in domain grounds, shelves in dressing-rooms, and balustrading and gates in front of pavilion erected. Improvements now on domain:

Fencing, gates, draining, levelling, grassing, asphalt and grass tennis-courts, paths, pavilion and seats, and concrete cricket-pitch. Used for cricket, football, tennis, sports, picnics, and general recreation. Portion leased for grazing. Proposed operations for ensuing year: Repairing horse-paddock fence and levelling a small area.

PETONE DOMAIN.

Section No. 93, Block XIII, Belmont Survey District. Area, 13 acres and 13 perches.

Work done during year: Lamps maintained, and gorse and noxious weeds cut. Improvements now on domain: Fencing, footpaths, bridge over stream and gully, turnstile, gates, and lamps. Used as a promenade. Proposed operations for ensuing year: General maintenance.

PIPIRIKI DOMAIN.

Sections Nos. 1, 2, and 10, Block IV, Town of Pipiriki. Area, 17 acres 3 roods 29 perches.

This domain is under the control of the Commissioner of Crown Lands, Wellington.

POHANGINA DOMAIN.

Section No. 34 and Suburban Section No. 32B, Town of Pohangina. Area, 18 acres and 18 perches.

Work done during year: Conveniences erected, seats placed in various parts of domain, and shelter-trees planted. Improvements now on domain: Fencing, levelling, draining, and planting. Used for football, cricket, and general recreation. Proposed operations for ensuing year: Stumping, clearing, and levelling.

PONGAROA DOMAIN.

Suburban Section No. 12, Pongaroa Township. Area, 13 acres and 12 perches.

Work done during year: Dead trees replaced, and 4½ chains of fencing erected by members of the Board at their own expense. A track from Pongaroa Bridge and conveniences are in course of construction. Improvements now on domain: Fencing, felling, ploughing, levelling, grassing, two buildings, 6 ft. track, six park seats, turnstile, and plantation. Used for sports, football, cricket, hockey, and picnics. Portion leased. Proposed operations for ensuing year: Erecting ladies' cloak-room and metalling 10 chains of track.

POUKIORE DOMAIN.

Section No. 35, Block XV, Tiriraukawa Survey District. Area, 17 acres 3 roods 8 perches.

Improvements now on domain: Fencing, grassing, stumping, dam, and plantation. Used for grazing.

PUKEOKAHU DOMAIN.

Section No. 17B, Block IX, Pukeokahu Survey District. Area, 6 acres 2 roods 35 perches.

This domain is under the control of the Commissioner of Crown Lands, Wellington. Improvements now on domain: Fencing and grassing. Leased.

QUEEN'S PARK DOMAIN.

Portions of Reserves E and K, Town of Wanganui. Area, 15 acres 3 roods 22 perches.

Work done during year: General maintenance. Improvements now on domain: Fences, plantations, band-rotunda, band-room, museum, and tennis-courts. Used as a public park and for band-concerts and tennis.

RAETIHI DOMAIN.

Sections Nos. 211 and 290, Town of Raetihi; 251, Suburbs of Raetihi; and 29, Block VI, Makotuku Survey District. Area, 26 acres and 4 perches.

Work done during year: 1¾ acres ploughed, and fences put in good repair. Improvements now on domain: Fencing, draining, ornamental trees, conveniences, stumping, ploughing, grassing, and tennis-courts formed by the Raetihi Lawn Tennis Club. Used for sports and picnics. Portion leased. Proposed operations for ensuing year: Erecting a fence on the roadside of the garden and scenic reserves.

RANGATAUA TOWN DOMAIN.

Sections Nos. 6 and 7, Block IX, Town of Rangataua. Area, 10 acres and 5 perches.

Work done during year: Levelling of about 3 acres commenced. Improvements now on domain: Fencing and levelling. Used for sports. Proposed operations for ensuing year: Completing levelling, grassing, ring-fencing, felling, stumping, and clearing.

RANGIWAHIA DOMAIN.

Section No. 61, Town of Rangiwahia. Area, 10 acres.

Work done during year: Hedge trimmed. Improvements now on domain: Buildings, fences, and tether-posts.

RAURIMU DOMAIN.

Section No. 5, Block IV, Town of Raurimu. Area, 2 acres 3 roods 10 perches.

Under the control of the Commissioner of Crown Lands, Wellington. The area has been felled, grassed, and partly fenced.

SCARBOROUGH DOMAIN.

Suburban Section No. 51, Town of Scarborough. Area, 12 acres and 30 perches.

Work done during year: Fences repaired and gateways metalled. Improvements now on domain: 80 chains of fencing, 1 acre plantation, and 4 acres ploughed, levelled, and grassed for recreation purposes. Used for picnics, football, and cricket. Portion leased.

TAIHAPE DOMAIN.

Suburban Sections Nos. 21, 35, and 38 to 44, Block II, Town of Taihape; and Sections Nos. 96 to 99, Block XIV, Ohinewairua Survey District. Area, 105 acres 3 roods 11 perches.

Work done during year: General maintenance. Improvements now on domain: Fencing, tennis-court, pavilion, four-roomed cottage, stables, and walks. Used for picnics, as a promenade, and for general recreation. Proposed operations for ensuing year: Improving seating-accommodation and widening footpaths.

TAIHAPE OVAL DOMAIN.

Block X, Town of Taihape. Area, 9 acres 3 roods 24 perches.

Work done during year: Grounds top-dressed, grass cut and removed, and general maintenance. Improvements now on domain: Picket fence and plantation. Used for sports, picnics, football, cricket, and hockey. Proposed operations for ensuing year: General maintenance.

TANE DOMAIN.

Sections Nos. 21 and 22, Block XVI, Mangahao Survey District. Area, 23 acres 3 roods.

This domain is under the control of the Commissioner of Crown Lands, Wellington. Improvements now on domain: Fencing and grassing. Leased.

TIRIRAUKAWA DOMAIN.

Section No. 42, Block VI, Tiriraukawa Survey District. Area, 9 acres 2 roods 25 perches.

Work done during year: Scrub burnt off and land laid down in grass. Improvements now on domain: Fencing, clearing, and grassing. Portion leased on improvement conditions.

TORERE DOMAIN.

Sections Nos. 43, 44, and 45, Torere Village. Area, 11 acres 1 rood 19 perches.

Nil report furnished.

TURAKINA DOMAIN.

Section No. 191, Block I, Koitiata Survey District. Area, 85 acres 2 roods.

Nil report furnished.

TUTAEKARA DOMAIN.

Section No. 49, Block XIV, Mangahao Survey District. Area, 9 acres 2 roods 14 perches.

Work done during year: Dead trees cleared away and fences attended to. Improvements now on domain: Fencing and grassing. Used for picnics. Leased. Proposed operations for ensuing year: Completion of fencing and grassing.

UTIKU DOMAIN.

Sections Nos. 4 and 5, Block I, Potaka Township. Area, 5 acres and 11 perches.

Work done during year: Domain ploughed and cropped, and fences and gates repaired. Improvements now on domain: Fencing, felling, stumping, grassing, and shed. Proposed operations for ensuing year: Erecting shed and convenience, repairing fences, and ploughing and grassing.

WAIONE DOMAIN.

Section No. 14, Block III, Mount Cerberus Survey District. Area, 6 acres.

Work done during year: Boundary-fence repaired. Improvements now on domain: Fencing, clearing, stumping, and levelling. Used for cricket, football, and picnics.

WAIOPEHU DOMAIN.

Section No. 43, Block II, Waiopehu Survey District. Area, 16 acres 2 roods.

This domain is fenced on three sides.

WAIOURU DOMAIN.

Section No. 15, Waiouru Township (Suburban). Area, 9 acres and 1 perch.

This domain is under the control of the Commissioner of Crown Lands, Wellington.

WAIRARAPA LAKE DOMAIN.

Sections Nos. 21, 22, 24, 25, and 26, Block VII, Wairarapa Survey District. Area, 315 acres 1 rood 25 perches.

Under the control of the Commissioner of Crown Lands, Wellington.

WAIROA DOMAIN.

Runs Nos. 2, 3, and 4, Block XI, Wairoa Survey District. Area, 229 acres 2 roods.

Work done during year: Water-tank erected and general maintenance. Improvements now on domain: Shelter-shed, cook-house, swings, plantation, fencing, well and pump. Used for picnics and fishing camping-ground. Leased.

WANGANUI RIVER TRUST DOMAIN.

Situated on the banks of the Wanganui River. Area, 33,033 acres.

Steps are being taken to offer portions of this domain for lease. The scenic areas will be protected prior to offering the lands.

WAVERLEY DOMAIN.

Part of Waverley Town Belt. Area, 126 acres 3 roods 9 perches.

Work done during year: Hot-air engine erected for pumping water on to bowling-green and tennis-courts. Improvements now on domain: Building, fencing, bowling-green, tennis-court, croquet-courts, windmill, three large tanks, hot-air engine, and water-pipes laid on to bowling-green and tennis-courts. Used for tennis, bowling, cricket, football, croquet, picnics, sports, and shows. Proposed operations for ensuing year: Painting all buildings and removing old fences.

MARLBOROUGH LAND DISTRICT.

BROWNLEE DOMAIN.

Sections Nos. 68, 69, and 70, Town of Havelock. Area, 2 acres and 29 perches.

Work done during year: Gates erected and general maintenance. Improvements now on domain: Fences, drains, levelling, clearing, pavilion, gates, and outbuildings. Used for sports, tennis, hockey, football, cricket, and general recreation.

FLAXBOURNE DOMAIN.

Section No. 10, Block VI, Town of Ward. Area, 14 acres and 32 perches.

Work done during year: Old boundary-fence replaced, and ornamental trees fenced off. Improvements now on domain: Fencing, shelter and ornamental trees, levelling, and grassing. Used for general recreation. Portion leased. Proposed operations for ensuing year: Erecting entrance-gates and providing a water-supply.

MONKEY FACE DOMAIN.

Section No. 5, Block III, Hundalee Survey District. Area, 333 acres.

The domain is of rough formation, without means of access, and is used for grazing purposes. The fencing is the property of the lessee.

OMAKA DOMAIN.

Sections Nos. 31 and part 2 of 33, Block III, Taylor Pass Survey District, and Allotment 4 of Section No. 45, Opawa District, Block XVI, Cloudy Bay Survey District. Area, 252 acres.

Work done during year: Planting, fencing, and general maintenance. Improvements now on domain: Fences, drains, plantations, and protective works. Used for sports and general recreation. Leased. Proposed operations for ensuing year: Planting, draining, and general maintenance.

PELORUS DOMAIN.

Sections Nos. 25, Block VIII, Heringa Survey District, and 66 (Te Hau Island), Block XI, Wakamarina Survey District. Area, 22 acres.

9 acres of the domain is an island in the Pelorus River subject to floods; the remaining 13 acres is in native bush.

PICTON DOMAIN.

Part of Section No. 1147, Town of Picton. Area, 9 acres 2 roods.

Work done during year: Noxious weeds kept down. This domain is steep and rocky. It contains some native bush, and an area of about 2 acres suitable for picnics.

SEDDON DOMAIN.

Section No. 9, Block VII, Town of Seddon. Area, 13 acres 2 roods 3 perches.

Work done during year: Grounds and trees attended to. Improvements now on domain: Pavilion, conveniences, plantations, seats, and tennis-court. Used for outdoor games, picnics, and pleasure-grounds. Portion leased. Proposed operations for ensuing year: General maintenance.

WAITOHI DOMAIN.

Sections Nos. 1150 and 1161, Town of Picton. Area, 15 acres 1 rood 15 perches.

Work done during year: Further reclamation carried out, and ground top-dressed and sown down in grass. Proposed operations for ensuing year: Further reclamation and grassing.

NELSON LAND DISTRICT.

AORERE CAVES DOMAIN.

Sections Nos. 13 and 14, Block VIII, Aorere Survey District. Area, 128 acres 1 rood 25 perches.

No improvements effected.

APPLEBY BRIDGE DOMAIN.

Section No. 2, Block II, Waimea Survey District. Area, 13 acres.

Work done during year: A number of shelter-trees planted and protected. The domain is largely used for picnics. Leased.

BLACKWATER DOMAIN.

Section No. 14, Block XII, Mawhera-iti Survey District. Area, 6 acres 3 roods.

Improvements now on domain: Clearing and levelling about 2¾ acres. Used for sports, picnics, cricket, football, and general recreation. Proposed operations for ensuing year: Levelling and fencing.

BRITANNIA HEIGHTS DOMAIN.

Parts of Sections Nos. 1 and 4, Suburbs of Nelson. Area, 11 acres 2 roods 24 perches.

Improvements now on domain: Fencing and planting. Used for general recreation.

BULLER DOMAIN.

Section No. 35, Block IV, Kawatiri Survey District. Area, 200 acres.

No improvements effected.

DENNISTON DOMAIN.

Section No. 5, Block VI, Kawatiri Survey District. Area, 6 acres.

Work done during year: Contract completed for excavating, cutting drain, and filling in on north side of ground. Improvements now on domain: Dressing-shed and drain. Used for football, cricket, hockey, sports, and picnics. Proposed operations for ensuing year: Top-dressing of ground.

GLOBE HILL DOMAIN.

Section No. 2, Block II, Waitahu Survey District. Area, 5 acres and 10 perches.

Domain Board appointed in March, 1912. It is proposed to survey and level a portion of the reserve, at an estimated cost of £100.

MILLERTON DOMAIN.

Sections Nos. 142 and 263, Town of Millerton. Area, 9 acres 2 roods 36 perches.

Work done during year: Ground prepared and trees planted and fenced, gates and turnstile erected, and concrete cricket-pitch laid down. Improvements now on domain: Filling in, levelling, grassing, pavilion, tool-shed, fencing, gates, turnstile, and road. Used for cricket, football, tennis, hockey, sports. picnics, and Territorial manœuvres. Portion leased. Proposed operations for ensuing year: Further levelling, cutting, filling in, and planting.

MOTUEKA DOMAIN.

Section No. 193, Block III, Motueka Survey District. Area, 50 acres.

Improvements now on domain: Seven-wire fence and plantation of ornamental trees and shrubs. The Board has been empowered by statute to dispose of the domain in order to secure a more suitable area.

MURCHISON DOMAIN.

Sections Nos. 18 and 20 (Square 170), Town of Murchison. Area, 27 acres 2 roods.

Improvements now on domain: Grassing, fencing, felling, and stumping. Used for sports, picnics, and shows. Leased. Proposed operations for ensuing year: Stumping and clearing, and erecting conveniences and shelter-shed.

NELSON DOMAIN.

Situated in City of Nelson. Area, 21 acres 3 roods 5 perches.

Improvements now on domain: Fencing and planting. Used for general recreation.

PUPONGA DOMAIN.

Sections Nos. 43, Port of Puponga, and 1, Village of Puponga. Area, 2 acres 1 rood 7 perches.

This domain is under the control of the Commissioner of Crown Lands, Nelson.

RABBIT ISLAND DOMAIN.

Area, 2,600 acres of Rabbit Island.

About thirty trees were planted during the year: these were given by residents. Improvements now on domain: House, stable, fencing, and plantation. Used for sports, picnics, and shooting meetings. Proposed operations for ensuing year: Planting trees and protecting same.

REEFTON DOMAIN.

Section No. 189 of Square 131, Block IX, Reefton Survey District. Area, 58 acres 2 roods 2 perches.

Work done during year: A contract was let for clearing, stumping, and ploughing 4 acres. Improvements now on domain: Fencing and clearing. Used for sports and picnics. Leased. It is proposed to level, crop, and improve ground when cleared, and to carry on tree-planting.

WAI-ITI DOMAIN.

Part Section No. 156, Block XV, Wai-iti Survey District. Area, 6 acres.

Work done during year: Trees planted, plantation attended to, and portion of domain ploughed ready for levelling. Improvements now on domain: Fencing, plantation, clearing, and levelling. Used for picnics and general recreation. Leased. Proposed operations for ensuing year: Planting trees and levelling.

WAIUTA DOMAIN.

Section No. 87, Township of Blackwater. Area, 7 acres and 5 perches.

Work done during year: Clearing. Improvements now on domain: Felling and grubbing. Proposed operations for ensuing year: Clearing, burning, grassing, draining, and erecting buildings.

WAKEFIELD DOMAIN.

Sections Nos. 1 and 2, Block XVI, Wai-iti Survey District. Area, 5 acres 1 rood 36·8 perches.

Work done during year: Trees protected and ground cleared. Improvements now on domain: Cricket-pitch, football-ground, cycling and running track, well and pump, footbridge, ornamental trees, and conveniences. Used for cricket, football, sports, and picnics.

WANGAPEKA DOMAIN.

Section No. 31, Block XV, Wangapeka Survey District. Area, 13 acres 1 rood 33 perches.

Improvements now on domain: Two tennis-courts, clearing, and fencing. Used for picnics and tennis. Proposed operations for ensuing year: Erecting shelter-shed.

WESTPORT (1) DOMAIN.

Sections Nos. 1020, 1021, and 1022, Town of Westport. Area, 38 acres 1 rood 6 perches.

Work done during year: Noxious weeds destroyed, walks and seats repaired, and general maintenance. Improvements now on domain: Fencing, draining, caretaker's lodge, band-rotunda, fishpond and hatchery, ornamental trees, shrubs, and lawn. Used as a pleasure resort and for picnics and general recreation. A portion of the domain is leased.

WESTPORT (2) DOMAIN.

Sections Nos. 986 and 987 (Victoria Square), Town of Westport, 103 and 104, Block VII, Kawatiri Survey District, and 12 acres 2 roods 30 perches, in the Town of Westport, known as the Beach Reserve. Area, 114 acres 1 rood 2 perches.

A caretaker has been employed during the year keeping the grounds in good order. Improvements now on domain: Clearing, draining, levelling, fencing, grandstand, tennis-courts, pavilion, croquet-lawn, permanent walks and tracks, grassing, and ornamental trees and shrubs planted. The reserve on the beach is fenced and a portion cleared. Used as a pleasure-ground and for sports, football, cricket, hockey, tennis, and croquet. Portion leased. Proposed operations for ensuing year: Generally improving Victoria Square, and clearing and fencing at Beach Reserve.

WESTLAND LAND DISTRICT.

BLACKBALL DOMAIN.

Reserve No. 1237, Block II, Mawheranui Survey District. Area, 7 acres.

Work done during year: A bazaar and art union resulted in a profit to the Board of over £200, of which amount the Blackball Coal Company subscribed twenty-five guineas and Mr. Charles Dawes ten guineas. The Government provided a pound-for-pound subsidy. A contract under the supervision of competent engineers was let for levelling and grassing an area 122 yards by 80 yards, which when completed will result in a most satisfactory recreation-ground. In addition, some 20 chains of ornamental hedge, and ornamental trees at intervals, were planted. Improvements now on domain: Drains, fencing, shed, and gates. Proposed operations for ensuing year: Constructing a road 4 chains long; felling, grubbing, and sowing an area 80 yards by 44 yards; and grubbing, levelling, and grassing a strip 1 chain wide round the playing-field.

COBDEN DOMAIN.

Reserve No. 44, Block IV, Cobden Survey District. Area, 8 acres 1 rood 24 perches.

Work done during year: Domain entirely and substantially fenced. Improvements now on domain: Clearing, levelling, fencing, gates, and shelter-shed. Used for cricket, football, hockey, picnics, and sports. Proposed operations for ensuing year: Draining, levelling, and shrub-planting.

Dobson Domain.

Reserves Nos. 258 and 290, Town of Dobson. Area, 8 acres 2 roods

Used for football and cricket.

Kumara Domain.

Sections Nos. 815 to 835 (Reserves Nos. 221 and 824) and 778 to 814 (Reserve No. 255), Town of Kumara. Area, 7 acres 1 rood 13 perches.

Work done during year: Fencing, filling in, and draining. Improvements now on domain: Fencing, draining, levelling, and grassing. Used for football, hockey, and cricket. Portion leased. Proposed operations for ensuing year: Levelling and general maintenance.

Moana Domain.

Section No. 954, Block IV, Brunner Survey District. Area, 8 acres 1 rood 10 perches.

Work done during year: A tender was let for logging up and clearing domain, but owing to the wet summer a number of heaps are left till a suitable burn can take place. Improvements now on domain: Fences, wharf, and booth. Used for regattas and picnics. Proposed operations for ensuing year: Burning logs and clearing ground, cutting blackberries, and general improvements.

Okarito Domain.

Reserve No. 201, Block II, part of Reserve No. 204 and the Okarito Racecourse, Block XI, Okarito Survey District. Area, 159 acres 2 roods.

Improvements now on domain: Racecourse and running-track. Used for races, sports, and picnics. Proposed operations for ensuing year: Draining, filling in, and fencing.

Ross Domain.

Situated in Town of Ross. Area, 3 acres 3 roods 16 perches.

Work done during year: Levelling ground and planting trees. Improvements now on domain: Fences, drains, cricket-pitch, ornamental trees, sheds, conveniences, and water-supply. Used for sports, cricket, football, and picnics. Proposed operations for ensuing year: Levelling and tree-planting.

Runanga Domain.

Reserve No. 361, Block XXXIX, Town of Runanga. Area, 19 acres 3 roods 16 perches.

Tenders were called for the clearing of 3½ acres and for 12 chains of ditching, and the work was completed during the year.

CANTERBURY LAND DISTRICT.

Akaroa Domain.

Reserves Nos. 88 and 1724, Akaroa Survey District, and Section No. 45, Town of Akaroa. Area, 10 acres 2 roods.

Work done during year: Trees thinned and transplanted, paths cleaned, and general maintenance. Improvements now on domain: Fencing, macrocarpa hedges, summer-houses, blockhouse, bridges, fountain, water-supply installed, gates, garden-seats, asphalt tennis-court, and an avenue of native and exotic trees and shrubs. Used for picnics, tennis, and general recreation. Proposed operations for ensuing year: General maintenance.

Alford Forest Domain.

Reserve No. 2738, Block V, Spaxton Survey District. Area, 13 acres 3 roods 2 perches.

Work done during year: Gorse and broom grubbed in plantation and on road. Improvements now on domain: Fencing, trees, and grassing. Used for grazing.

Arowhenua Domain.

Reserves Nos. 3003 to 3013 and 3412, Town of Arowhenua. Area, 10 acres 2 roods 38 perches.

During the year the course of the creek running through the domain has been kept clear of weeds; a permanent hand is employed for the purpose. Leased for cropping and grazing.

Arundel Domain.

Reserve No. 2965, Town of Arundel, Block VI, Orari Survey District. Area, 4 acres 1 rood 6 perches.

Proposed operations for ensuing year: Attending to fences and shrubs.

Ashburton Domain.

Situated in the Town of Ashburton. Area, 89 acres 1 rood 24 perches.

Work done during year: An extensive piece of ground cleared of trees to make room for additional tennis-courts, and 7 acres levelled and sown down for a football-ground. Improvements now on domain: Four and a half miles of fencing, curator's lodge, two propagating-houses, pavilion and stand in sports-ground, shade-house, tool-house, bathing and other sheds, three asphalt and nine grass tennis-courts, meteorological station, tennis and bowling clubs' pavilions, water-supply (with tanks, &c.), water wheel and pipes, asphalt cycling-track, cricket-ground, croquet and bowling greens, lakes, rosery, plantations, flower-gardens, and wooden and iron gates. The domain is used for general recreation. During the summer picnic parties from all parts of Canterbury visit this attractive and delightful domain. Proposed operations for ensuing year: Laying on high-pressure water-supply to the buildings and grounds.

ASHLEY DOMAIN.

Reserve No. 3102, Blocks IV, VI, VII, and VIII, Rangiora Survey District. Area, 1,920 acres.

Work done during year: Scrub cleared, and waste land generally improved. Improvements now on domain: Fencing, protective works, and clearing. Proposed operations for ensuing year: Erecting protective works, if necessary. The domain consists of waste lands, chiefly in the Ashley River bed.

ASHLEY GORGE DOMAIN.

Reserves Nos. 3094, Block IV, Oxford Survey District, and 3231, Blocks XVI, Upper Ashley Survey District, XII, Mount Thomas Survey District, IV, Oxford Survey District, and I, Mairaki Survey District. Area, 74 acres.

Work done during year: Road shingled, trees planted, and fencing, entrance-gate, turnstiles, and notice-boards erected. Improvements now on domain: Fencing, road, retiring-room for ladies, concrete fireplaces, gates, turnstiles, plantation, and native bush. Used for picnics. Leased. Proposed operations for ensuing year: Fencing, planting, and clearing scrub.

ATAAHUA DOMAIN.

Reserve No. 3705, Block III, Ellesmere Survey District. Area, 5 acres 3 roods 39 perches.

Work done during year: Trees attended to and fences repaired. Improvements now on domain: Fences and plantation. Used for sports and picnics. Proposed operations for ensuing year: Keeping plantations and fences in order.

BECKENHAM DOMAIN.

Lots 165 and 166, and parts of Lots 2, 3, 4, 5, and 6 of Rural Section No. 49, Sydenham Ward, Christchurch. Area, 11 acres 1 rood 24 perches.

Work done during year: Land ploughed, disced, harrowed, and crop of oaten hay taken off; left in fallow for the purpose of eradicating twitch and weeds before finally laying down in grass. Used principally as a children's playground.

BURKE'S PASS DOMAIN.

Reserve No. 1595, Block VIII, Burke Survey District. Area, 45 acres and 3 perches.

Work done during year: Trees planted. Improvements now on domain: Fencing, trees, and grassing. Proposed operations for ensuing year: Repairing fences and grubbing noxious weeds. The domain is used for general recreation and grazing.

CARLETON DOMAIN.

Reserves Nos. 2808 and 2858, Block V, Mairaki Survey District. Area, 13 acres 3 roods.

Improvements now on domain: Fencing, hedges, trees, building, concrete cricket-pitch, and conveniences. Used for sports, cricket, picnics, and general recreation. Leased.

CASHMERE HILLS DOMAIN.

Reserve No. 161, Halswell Survey District. Area, 188 acres 3 roods 11 perches.

Work done during year: New room built for the sale of light refreshments to visitors; pathway to kiosk improved, and trees topped where view blocked; survey made showing position of plantation, houses, fences, springs, &c.; and line of road on easy grade set out from Dyer's Pass Road to top of spur near centre of plantation. Improvements now on domain: Fencing, caretaker's cottage, and brick kiosk. Used as a holiday resort. Leased.

CAVE DOMAIN.

Reserve No. 3683 (Rosewill Settlement), Block IX, Pareora Survey District. Area, 10 acres 1 rood 35 perches.

The young grass has grown particularly well, and the sports-ground is now in excellent condition. Improvements now on domain: Fencing, ploughing, and grassing. Leased. Used for football and general recreation. Proposed operations for ensuing year: Assisting tenant in digging a well, which will become the property of the Board on the expiration of the lease.

CHERTSEY DOMAIN.

Reserves Nos. 2376, Block VIII, Ashburton Survey District, and 3057, Town of Chertsey. Area, 32 acres and 25 perches.

Work done during year: Two hundred and ninety-two trees felled by order of Road Board. These were overshadowing the road and rendering it dangerous for traffic. The trees will probably be sold, and the ground replanted with ornamental trees and shrubs. Improvements now on domain: Fencing, trees, bath-house, water-races, running-track, and grassing. Used for general recreation.

CHRISTCHURCH DOMAIN.

Parts of Reserves Nos. 24 and 25, Block XI, Christchurch Survey District. Area, 495 acres.

Work done during year: About 10 acres on west side of tea-kiosk prepared for children's playground; walks in old native section shingled and remade; new rhododendron-border trenched and planted, and new walk formed on south side of same; new gates erected at Riccarton entrance; 16 acres cropped with potatoes to clean land for resowing and levelling for hockey-grounds; rose-garden and native section extended; new Australian section laid out; new nursery formed in North Park; river-bank at Carlton Bridge levelled and improved; large number of imported shrubs planted; and large tool-house, stables, and cart-sheds erected. A large sum was raised by means of a garden fête. Improvements now on domain: Fencing, iron and other gates, avenues, walks, carriage-drives, magnetic observatory, museum, house for head gardener, cottage for park ranger and garden caretaker, tool-sheds, three hothouses, spade-house, stables, cart-sheds, four large and several small bridges, lawns, walks, avenues, water-tanks, motor-pump, artesian wells, five ornamental lakes, nursery, trees, and tea-kiosk. Used for acclimatization purposes and for polo, golf, cricket, bowls, tennis, croquet, football, hockey, model-yachting, military encampments and reviews, picnics, and general recreation.

COALGATE DOMAIN.

Reserve No. 2409, Block VIII, Hororata Survey District. Area, 28 acres 2 roods 29 perches.

Improvements now on domain: Fencing, plantations, asphalt tennis-court and croquet-court. Used for tennis, croquet, and grazing. Proposed operations for ensuing year: Erecting ladies' room and conveniences, trimming fences, eradicating gorse, and planting laurel fence by tennis-court.

CONWAY DOMAIN.

Section No. 46, Block XII, Hawkswood Survey District. Area, 10 acres.

Leased for grazing. Improvements now on domain: Fencing and grassing.

COURTENAY DOMAIN.

Reserve No. 2413, Block VIII, Hawkins Survey District. Area, 20 acres.

Improvements now on domain: Boundary and inner fences and plantations. Used for picnics. Proposed operations for ensuing year: General maintenance.

CULVERDEN DOMAIN.

Reserve No. 3758, Block VI, Culverden Survey District, Culverden Settlement. Area, 18 acres 2 roods 31 perches.

Work done during year: Grass cleared from trees in plantations. Improvements now on domain: Standard, wire, and netting fencing, plantations, bridge, gates, and turnstile. The banks of the creek have been levelled and planted with shrubs. Used for cricket, tennis, and croquet. Proposed operations for ensuing year: Ploughing and sowing down domain in grass, and levelling banks of stream.

CUST DOMAIN.

Reserves Nos. 2422 and 2423, Mairaki Survey District. Area, 17 acres 3 roods 33 perches.

The domain is now under the control of the Commissioner of Crown Lands, Christchurch.

DARFIELD DOMAIN.

Reserve No. 2635, Hawkins Survey District. Area, 10 acres.

Improvements now on domain: Sod fences with gorse and wire, trees, two asphalt tennis-courts, and wooden building. Used for tennis and football. Proposed operations for ensuing year: Topping trees and grubbing gorse.

DOMETT DOMAIN.

Reserves Nos. 3177, Block XIX, 3241 and 3895, Block XVI, Lowry Peaks Survey District, and 3148, Cheviot Survey District. Area, 36 acres and 38 perches.

Work done during year: Trees planted. Improvements now on domain: Fencing, plantation, and two tennis-courts. Used for general recreation. Proposed operations for ensuing year: Fencing and tree-planting. Portion leased.

DORIE DOMAIN.

Reserve No. 3568, Block VI, Rakaia Survey District. Area, 4 acres.

Improvements now on domain: Fencing and trees. Used for general recreation. Proposed operations for ensuing year: General maintenance.

DUNSANDEL DOMAIN.

Reserve No. 316, Block VIII, Selwyn Survey District. Area, 10 acres.

Work done during year: Trees topped, stile erected, and shingling carried out. Improvements now on domain: Four-roomed cottage, pavilion containing three rooms, bowling-green, tennis-courts, cricket-ground, running-track, swimming-bath, and plantations. Used for cricket, football, bowls, tennis, hockey, bathing, croquet, and sports.

EALING DOMAIN.

Reserve No. 3112, Rangitata Survey District. Area, 10 acres.

Improvements now on domain: Fencing, gates, and plantation. Used for grazing.

ELLESMERE DOMAIN.

Reserve No. 1630, Southbridge Survey District. Area, 213 acres.

Work done during year: Fences trimmed, gorse grubbed, grandstand repaired, and erection of new picket fence commenced. On Osborne Park conveniences were built, fencing erected round trees, and an arch placed over the entrance-gate. Ornamental trees were planted on the Southbridge recreation-ground. Improvements consist of building, grandstand, office, racing-track, windmill and concrete trough, about one and a half miles of fencing, gates, and plantation; on Osborne Park, gates, bridge, trees, and fencing; on the Southbridge ground, gates, picket fence, and trees. Used for sports, races, and picnics. Operations for ensuing year: Completing repairs to grandstand, the trimming of fences, and erection of picket fence, all on the home domain.

FAIRLIE DOMAIN.

Reserve No. 2755, Tengawai Survey District. Area, 29 acres 2 roods

Work done during year: New fencing and gates erected, water-races cleaned, gorse grubbed, trees planted and grounds laid out, grass cut, and seats placed in position. Improvements now on domain: 100 chains of standard-and-wire fencing, 34 chains of willow protective planting, with bank, swimming-pond, and trees. Used for general recreation and for grazing. Portion leased. Proposed operations for ensuing year: Continuation of present work in the direction of making domain suitable for a pleasure resort, and further planting and river-protection works as funds permit.

GERALDINE DOMAIN.

Reserves Nos. 305, 306, 1624, and 2716, Town of Geraldine. Area, 94 acres 1 rood 21 perches.

Work done during year: 16 chains of new fence erected, Coronation gates completed, blackberry cleared in Bush Domain, and paths and drives kept in good order. Improvements now on domain: Fencing, gates, paths, flower-beds, bicycle-track, pavilion and rooms, swimming-bath, dressing-sheds, plantation, and specimen trees. Used for sports, cricket, football, bowls, and picnics. Portion of the domain is leased. Proposed operations for ensuing year: Top-dressing cricket-oval, and keeping paths, fences, and flower-beds in good order.

GLENTUNNEL DOMAIN.

Reserve No. 2407, Sections Nos. 35467 and 35468, and part of Selwyn River bed, Block VIII, Hororata Survey District. Area, 146 acres and 15 perches.

Work done during year: Fences renewed and trimmed, gorse grubbed, gates, stiles, and by-laws erected, seats renewed, and trees trimmed and avenue partly formed in the plantation. Improvements now on domain: Fencing, plantations, shrubs, copper and pump house, ladies' and gentlemen's cloak-rooms, dressing-shed, committee-rooms, concrete cricket-pitch, two grass and one asphalt tennis-courts. Used for cricket, football, tennis, picnics, and general recreation. Proposed operations for ensuing year: Felling trees, forming walks, improving sports-grounds, erecting seats in avenues, and general maintenance.

GOVERNOR'S BAY DOMAIN.

Reserve No. 3060, Block VII, Halswell Survey District. Area, 6 acres 2 roods 3 perches.

Work done during year: Grounds kept in repair. Improvements now on domain: Fencing, public hall, supper-room, ladies' dressing-room, dwellinghouse, stables, harness-room, trap-house, drains, trees, flower-beds, and shrubs. Used for sports, cricket, and picnics. Portion leased. Proposed operations for ensuing year: Repairing dwellinghouse.

GREENDALE DOMAIN.

Reserve No. 1565 and part of Rural Section No. 9097, Block XIV, Hawkins Survey District. Area, 15 acres and 4 perches.

Work done during year: New standard-and-wire boundary-fence erected, and two new stiles built. Improvements now on domain: Fencing, pavilion, asphalt cricket-pitch, asphalt tennis-court, plantations, and cottage. Used for cricket and tennis. Leased. Proposed operations for ensuing year: Repairing cottage, and replacing failures in trees. The tennis club propose laying down another asphalt court.

HALSWELL DOMAIN.

Reserve No. 110, Block XIV, Christchurch Survey District. Area, 20 acres.

Work done during year: New drain cut through sandhill, the spoil being used to fill waterholes at the main entrance, and sides of drain faced with rocks; cycle-track laid down by Sports Club, and new well sunk by Tennis Club, both with assistance from the Board. Failures replaced in Coronation Avenue. Improvements now on domain: Fences, plantations, drains, sports-track, tennis-courts, three artesian wells, and pavilion. Used for sports, tennis, and grazing. Proposed operations for ensuing year: Adding new room to pavilion and general maintenance.

HIGHBANK DOMAIN.

Reserve No. 3198, Highbank Settlement, Block II, Corwar Survey District. Area, 10 acres.

Improvements now on domain: Plantations and fencing.

HILLSBOROUGH DOMAIN.

Part of Rural Section No. 91, Block XVI, Christchurch Survey District. Area, 8 acres 3 roods 5 perches.

Work done during year: Cricket-pitch laid down and hedges cleaned. Improvements now on domain: Fencing, gates, and trees. Used for sports, football, cricket, and picnics.

HINDS DOMAIN.

Reserve No. 2281, Block III, Hinds Survey District. Area, 22 acres 2 roods 7 perches.

Nil report furnished.

HINDS NO. 2 DOMAIN.

Reserve No. 1262, Block VI, Hinds Survey District. Area, 9 acres 2 roods 33 perches.

Work done during year: Trees planted, concrete swimming-bath with dressing-room erected, and running-track laid down. Improvements now on domain: Fencing, plantation, water-race, asphalt tennis-court, concrete swimming-bath, dressing-room, running-track, and pavilion. Used for cropping, grazing, picnics, tennis, and sports. Proposed operations for ensuing year: Plastering swimming-bath, and levelling shingle-heaps and sowing grass.

HORORATA DOMAIN.

Reserves Nos. 1589 and 2217, Block XII, Hororata Survey District. Area, 226 acres 1 rood 32 perches.

Work done during year: Saddling-paddock enlarged, improvements to racecourse and tennis-court grounds, and lake and surroundings maintained in good order. Improvements now on domain: Fencing, buildings, grandstand, stables, offices, racecourse, cricket-ground, cycling-track, tennis-courts, artificial lake, well, pump, water-races, and plantations. Used for races, sports, cricket, tennis, and general recreation. Portion leased. Proposed operations for ensuing year: Forming paths through plantations, thinning out pine-trees, cutting down trees on roadside, laying down another tennis-court, and building a pavilion on the tennis-grounds and a new grandstand on racecourse.

HURUNUI DOMAIN.

Reserve No. 2598, Waipara and Waikari Survey Districts. Area, 85 acres 2 roods.

Work done during year: The lessees have ploughed and sown in oats, with seed supplied by the Board, an area of 76 acres. Race-track laid out afresh, shortened, and graded. Improvements now on domain: Fencing, ornamental gates, race-track, well, concrete water-trough, and plantations. Used for races. Leased.

KAIAPOI DOMAIN.

Reserves Nos. 74, 3658, and 3731, Blocks XII, XV, and XVI, Rangiora Survey District. Area, 275 acres and 32 perches.

Work done during year: Flower-beds, footpaths, and fences kept in order, and ninety *Pinus insignis* trees felled and cut into firewood and timber and replaced with ornamental shrubs. Improvements now on domain: Fences, gates, flower-beds, walks, seats, pond enclosed with wire netting and stocked with water-fowl and fish, artesian well, gable-roofed building with copper for the use of picnic parties, and trees and shrubs. Used for sports, picnics, and general recreation.

KAIKOURA DOMAIN.

Sections Nos. 410, Town of Kaikoura, 2 of 267, Suburbs of Kaikoura, and 2, 346, and 349, Block X, Mount Fyffe Survey District. Area, 101 acres 1 rood 2 perches.

Work done during year: Fences repaired, and new fence erected along Takahanga frontage, also iron fence erected round tennis-courts. Improvements now on domain: Fencing, two asphalt tennis-courts, cycling-track, concrete cricket-pitch, plantation, railing round portion of track, conveniences, golf-links, and rifle range. Used for tennis, football, hockey, cricket, sports, horse-racing, rifle shooting, and golf. Portion leased. Proposed operations for ensuing year: Planting trees and painting fences.

KIMBERLEY DOMAIN.

Reserve No. 1566, Block III, Hawkins Survey District. Area, 14 acres.

Work done during year: Fences cut, gorse grubbed, and water-race cleaned. Improvements now on domain: Fencing, plantation, water-race, bath, concrete cricket-pitch, and pavilion. Used for cricket, hockey, football, picnics, and general recreation. Leased. Proposed operations for ensuing year: Cutting trees into timber, shingling gateway, and erecting an addition to pavilion.

KIRWEE DOMAIN.

Reserve No. 2146, Hawkins Survey District. Area, 10 acres.

Work done during year: Gates painted, water-race cleaned, and general maintenance. Improvements now on domain: Fencing, tennis-courts, plantations, and sports-track. Used for sports, tennis, cricket, football, and general recreation.

KNOTTINGLY PARK DOMAIN.

Section No. 1857, Waimate Survey District. Area, 169 acres.

Work done during year: General maintenance. Improvements now on domain: Caretaker's cottage, plantations, windmill, well, cookhouse, ponds, pheasant-run, fountain, fences, high-pressure water-supply, trees, and flower-beds. Used for camping, picnics, and general recreation. Portion leased.

KONGUTU DOMAIN.

Reserve No. 3594, Block X, Wakanui Survey District. Area, 3 acres 1 rood.

Used for picnics.

KOWAI DOMAIN.

Reserve No. 2066, Block VIII, Section No. 7989 and part of Section No. 7855, Block XII, Grey Survey District. Area, 247 acres and 10 perches.

Work done during year: River-protection works carried out, trees topped, and fences repaired. Improvements now on domain: Fencing, planting, grandstand, stables, pavilion, tennis-courts, and plantation. Used for races, sports, picnics, tennis, cricket, football, and hockey. Leased. Proposed operations for ensuing year: Painting and repairing pavilion.

KOWAI PASS DOMAIN.

Reserve No. 1252, Block XII, Kowai Survey District. Area, 100 acres.

Work done during year: Gorse grubbed, macrocarpa hedge along main road lowered, land ploughed for extension of tennis-grounds, gate removed, others repaired, and new posts put in. Improvements now on domain: Fences, iron gates, two asphalt tennis-courts, pavilion, concrete cricket-pitch, football and hockey grounds, racecourse, and plantation. Used for picnics, football, cricket, tennis, hockey, and races. Leased. Proposed operations for ensuing year: Cutting hedges, grubbing gorse, and general maintenance.

LAKE ELLESMERE DOMAIN.

Reserve No. 3048, Block XII, Leeston Survey District. Area, 20 acres.

Improvements now on domain: Fencing, drains, wells, horse-trough, tennis-court, pavilion, and plantations. Used for accommodation of anglers. There are forty-four fishermen's huts on the domain. Portion leased.

LEITHFIELD DOMAIN.

Reserves Nos. 2777 and 3595, Teviotdale Survey District. Area, 51 acres.

Work done during year: Trees planted on Beach Domain, and cost of erecting embankment on river-front shared. Improvements now on domain: Fencing and plantation. Used for picnics and camping. Proposed operations for ensuing year: Erecting shelter-shed close to the beach. Leased.

LINCOLN DOMAIN.

Reserve No. 3761, Town of Lincoln. Area, 7 acres.

Work done during year: Fencing the portion of domain on which Coronation Library is erected. Improvements now on domain: Coronation Library, fencing, and trees. Used as a public resort. Proposed operations for ensuing year: Felling trees and erecting fences.

LITTLE RIVER DOMAIN.

Reserves Nos. 1649 and 3729, Block XIII, Pigeon Bay Survey District, and part of Section No. 4, Block III, of Reserve 887, Blocks II, Akaroa, and XIII, Pigeon Bay Survey District, and part of Section 3, Block II, of Reserve 887, Block XIII, Pigeon Bay Survey District. Area, 77 acres and 31·4 perches.

Work done during year: Coronation Library erected on Wai-ite portion, convenience erected, and tennis and football grounds kept in order. Improvements now on domain: Coronation Library, fencing, planting, tennis-courts, levelling, and grassing. Used for tennis, football, hockey, and picnics. Leased. Proposed operations for ensuing year: Forming running and cycling track.

LOBURN DOMAIN.

Reserve No. 3442, Block II, Rangiora Survey District. Area, 25 acres.

Work done during year: Post-and-cable fence erected for tethering horses, small gate erected, and general maintenance. Improvements now on domain: Fencing, plantations, lake, iron entrance-gate, Coronation Hall with ante-room, and a concrete cricket-pitch. Used for athletic sports. Portion leased.

LYTTELTON DOMAIN.

Parts of Sections Nos. 375 and 714, Town of Lyttelton. Area, 5 acres 3 roods 17 perches.

Work done during year: Trees thinned, hedges trimmed, grass cut, and fences and footpaths maintained. Improvements now on domain: Fencing, hedges, trees, and footpaths. Used as a pleasure resort.

LYTTELTON AND HEATHCOTE DOMAIN.

Reserve No. 3839, Block XVI, Christchurch Survey District. Area, 14 acres 3 roods.

Work done during year: Fencing and tree-planting. Improvements now on domain: Fencing, bridge, ten-roomed house and outbuildings, stable, and 1½ acres of plantation. Used for picnics, grazing, football, cricket, and as a cadet-encampment ground. Proposed operations for ensuing year: Forming two tennis-courts, tree-planting, and general improvements.

MACKENZIE DOMAIN.

Reserves Nos. 3152, 3153, 3155, 3156, 3168, 3169, and 3823, Town of Mackenzie, 3146, 3170, 3171, 3176, and 3178, Cheviot Survey District, and 3174 and 3175, Lowry Peaks Survey District. Area, 245 acres 1 rood 17 perches.

Work done during year: Botanical gardens laid out and planted, culvert put in, and gate erected on recreation-ground. Improvements now on domain: Pavilion, judge's box, fencing, and plantations. Used for sports, tennis, races, and general recreation. Portion leased for grazing.

METHVEN DOMAIN.

Reserves Nos. 3184, 2613, and 2613A, Block VII, Spaxton Survey District. Area, 22 acres 1 rood.

Work done during year: Tennis-courts completed, temporary bowling-green laid down, pavilion erected by tennis club, and general maintenance. Improvements now on domain: Fences, swimming-bath, dressing-shed, conveniences, water-race, plantation, trotting-track, bowling-green, and tennis-courts. Used for sports, picnics, football, cricket, tennis, and swimming. Leased. Proposed operations for ensuing year: Erecting new entrance-gates, fencing, and general maintenance.

MORVEN DOMAIN.

Reserve No. 3596, Block VII, Waitaki Survey District. Area, 60 acres.

Work done during year: Gorse cleared from round trees and tracks re-formed. Improvements now on domain: Fences, gates, plantations, conveniences, horse-rails, &c. Used for sports, picnics, and grazing. Proposed operations for ensuing year: General maintenance.

MOUNT SOMERS DOMAIN.

Reserves Nos. 2639 and 1633, Alford Survey District. Area, 122 acres.

Work done during year: Boundary-fence renewed, new netting fence erected round tennis-courts, and picket fence and gate painted. Improvements now on domain: Fencing, plantations, tennis-court, football-ground, running-track, swimming-pond, racecourse with necessary buildings, &c. Used for horse-racing, athletic sports, football, tennis, and picnics. The construction of a concrete swimming-bath on the domain is under consideration.

NEW BRIGHTON DOMAIN.

Reserve No. 3061, Christchurch Survey District. Area, 8 acres and 17 perches.

Nil report furnished.

OHOKA AND EYRETON DOMAIN.

Reserves Nos. 1567 and part 1500, Rangiora Survey District. Area, 215 acres 1 rood.

Work done during year: Fences trimmed, trees planted, and grandstand repaired. Improvements now on domain: Fencing, plantations, grandstand, stables, office, cloakroom, horse-yards, and dwelling. Used for races, general recreation, grazing, and cropping.

OKAIN'S BAY DOMAIN.

Reserves Nos. 3734 and 3753, Block IV, Okain's Survey District. Area, 16 acres.

Work done during year: By means of a luncheon-booth and cordial-stall at the Okain's Bay sports the sum of £12 was obtained towards reducing debt on the pavilion. Improvements now on domain: Pavilion with tables and fittings and ladies' and gentlemen's dressing-rooms, fencing, gates, and conveniences. Used for sports, football, cricket, hockey, and as a playground for children. Leased. It is expected that the pavilion debt will be totally paid off during ensuing year.

OPAWA DOMAIN.

Sections Nos. 155 to 177, Town of Opawa. Area, 7 acres 1 rood 18 perches.

Improvements now on domain: Fencing, hedges, and plantation. Used for sports, tennis, and football. Proposed operations for ensuing year: Erecting two dressing-rooms and convenience.

ORARI PARK DOMAIN.

Reserves Nos. 3028, 3081, and 3082, parts of Barker and MacDonald Streets, and Sections Nos. 11, Block V, and 16, Block VI, Town of Orari. Area, 14 acres and 28 perches.

Work done during year: Macrocarpa hedge trimmed and grass cut around tennis-court. The Coronation Hall was handed over free of debt by the committee to the Board. Improvements now on domain: Fencing, Coronation Hall, hedges, asphalt tennis-court, 600 specimen trees, pump, and garden-seats. Used for general recreation. Portion leased.

OXFORD DOMAIN.

Reserve No. 1651, Blocks VIII and XII, part of Rural Section No. 1889, Block VIII, and 18277, Block VI, Oxford Survey District. Area, 234 acres 2 roods 26 perches.

Work done during year: Dressing-rooms of grandstand rearranged, new iron gates, fencing, and horse-ties erected, garden-seats repaired, convenience erected, and walks and flower-beds maintained. River-protection works were carried out in Reserve No. 1651. Improvements now on domain: Fencing, plantations, bicycle-track, concrete cricket-pitches, asphalt tennis-courts, grandstand, pavilion, tea-rooms, dressing-rooms, ladies' retiring-room, concrete swimming-bath and dressing-sheds, pump, flower-borders, library hall, racecourse, grandstand, dressing-rooms, saddling-paddocks, and conveniences. Used for cricket, football, tennis, swimming, sports, picnics, horse racing and training. The Coronation Hall is used for club, committee, and debating meetings and technical classes. Proposed operations for ensuing year: Repairing tennis-courts and erecting rain-water tank. Leased.

PAPANUI DOMAIN.

Part of Rural Section No. 5, Block VII, Christchurch Survey District. Area, 6 acres 2 roods 25 perches.

Work done during year: Domain thoroughly pipe-drained, convenience erected, and fences repaired. The area is being levelled preparatory to sowing down in English grasses. A cycle-track is also in course of construction. Improvements now on domain: Pavilion, outbuildings, fencing, gates, trees, artesian wells, and drains.

PLEASANT POINT DOMAIN.

Reserve No. 1580, Pareora Survey District. Area, 66 acres 3 roods 34 perches.

Work done during year: Trees grubbed out and renewed. Improvements now on domain: Two tennis-courts and shelter-shed. Used for sports, picnics, tennis, and hockey.

PORT ROBINSON DOMAIN.

Reserves Nos. 3139 and 3150, Block IX, 3147, Block X, 3151, 3159, and 3160, Block XI, Cheviot Survey District. Area, 130 acres 3 roods.

Work done during year: Portion of boundary-fence altered, trees planted, and general maintenance. Improvements now on domain: Fencing, gates, grassing, plantations, and about 40 acres of native bush. Used for grazing. Portion leased. Proposed operations for ensuing year: Erecting a dam for permanent water-supply, fencing, and planting.

PREBBLETON DOMAIN.

Reserve No. 2419, Christchurch Survey District. Area, 3 acres 2 roods 15 perches.

Work done during year: Well sunk, new pump fixed, and fences erected. Improvements now on domain: Tennis-courts, cottage, and conveniences. Used for tennis, football, hockey, and cricket. Leased.

PUDDING HILL DOMAIN.

Formerly part of Reserve No. 3315, Block VIII, Hutt Survey District. Area, 87 acres 1 rood 28 perches.

Improvements now on domain: Cookhouse, conveniences, and fencing. Used for picnics and camping.

RANGIORA DOMAIN.

Reserves Nos. 132 and 1563, Rangiora Survey District. Area, 92 acres 2 roods.

Improvements now on domain: Fencing, plantation, grandstand, clay cycling-track, windmill water-service, shower-baths, conveniences, cricket-pavilion, and golf-links. Used for athletic sports, cricket, football, hockey, golf, and picnics. Portion leased. Proposed operations for ensuing year: Tree-planting.

RANGIORA AND WAIKUKU BEACH DOMAIN.

Reserves Nos. 3224, 3710, and 3718, Blocks VIII and XII, Rangiora Survey District. Area, 305 acres.

Work done during year: New entrance-gate and fences erected, and a large area planted with marram-grass. Improvements now on domain: Plantations, fencing, two artesian wells, shelter-shed, two dressing-sheds, conveniences, and stable. Used for picnics and camping. Portion leased. Proposed operations for ensuing year: Further planting of marram-grass.

RAWHITI DOMAIN.

Reserve No. 1616 and part of Reserve No. 1579, Borough of New Brighton. Area, 155 acres 3 roods 38 perches.

Work done during year: About 25 acres of burnt trees have been cleared and 4,000 trees planted, fire-breaks cleared, sand carted to low-lying portions to prevent accumulation of water, and boundary-fences repaired. Improvements now on domain: Fencing, four artesian wells, and hall. Used as a promenade and for picnics. Proposed operations for ensuing year: Continuation of clearing of burnt trees and replanting ground.

RESERVE NO. 3158.

Reserve No. 3158, Block XVI, Lowry Peaks Survey District. Area, 10 acres 2 roods 7 perches.

This domain is under the control of the Commissioner of Crown Lands, Christchurch. It comprises low-lying and wet land, is fenced, and used for grazing.

RESERVE NO. 3149.

Reserve No. 3149, Block XI, Cheviot Survey District. Area, 23 acres

This domain is under the control of the Commissioner of Crown Lands, Christchurch. It is situated at the mouth of the Hurunui River, and contains a few native trees. Used for fishing and picnic parties.

RESERVE NO. 3145.

Reserve No. 3145, Block V, Cheviot Survey District. Area, 5 acres.

This domain is under the control of the Commissioner of Crown Lands, Christchurch. It comprises a gully of native bush, and is leased to the owner of the adjoining property, who is required to protect it. Used for picnics and grazing.

RICHMOND DOMAIN.

Part of Rural Section No. 182, Block XII, Christchurch Survey District. Area, 7 acres.

Work done during year: Grounds surveyed and scheme prepared for levelling and filling in, necessitating the carting and spreading of about four hundred loads of soil; best English grasses were sown, and special preparations made for cricket-pitches; a deep well was sunk, and the centre of the ground thoroughly drained; two shallow wells were repaired, borders near entrance trenched and planted with shrubs; hedges and fences maintained in thorough repair; and gates repainted. Improvements now on domain: Fences, pavilion, conveniences, three wells, corrugated-iron fences, wrought-iron gates and gate-posts, and plantations. Used for sports, picnics, cricket, and football. Proposed operations for ensuing year: Rolling and cutting grass at regular intervals, and planting ornamental shrubs round the domain.

RUAPUNA DOMAIN.

Reserve No. 3034, Block X, Shepherd's Bush Survey District. Area, 27 acres.

Improvements now on domain: Plantation, fencing, grassing, and football and cricket ground. Leased.

SCOTSBURN DOMAIN.

Reserve No. 1554, Orari Survey District. Area, 50 acres.

Leased.

SEFTON DOMAIN.

Parts of Sections Nos. 3135 and 6675, Block IV, Rangiora Survey District. Area, 14 acres 2 roods 16 perches.

Work done during year: Asphalt tennis-court laid down by tennis club, the Board contributing £10 towards cost. Improvements now on domain: *Pinus insignis* plantation fenced in, flag-pole, twelve garden-seats, pavilion, tennis-courts, well, pump, concrete trough, and conveniences. Used for football, cricket, sports, tennis, and picnics. Leased. Proposed operations for ensuing year: General improvements.

SHEFFIELD DOMAIN.

Reserve No. 2377, Block XIII, Oxford Survey District. Area, 20 acres.

Work done during year: Fence cut, gorse grubbed, and garden-seats procured. Improvements now on domain: Fences, plantation, pavilion (with fireplace, table, and forms), judge's stand, ticket-office, conveniences, tennis-courts, and produce-shed erected by the Agricultural and Pastoral Association. Used for sports, cricket, tennis, hockey, football, trotting, military encampments, and picnics. Leased. Proposed operations for ensuing year: Procuring more garden-seats.

SHELDON PARK DOMAIN.

Reserve No. 3881, Blocks III and VII, Christchurch Survey District. Area, 8 acres.

Work done during year: Ground ploughed and scooped, shrubs and trees planted, wire netting and barbed-wire fence erected, trees dug round and cleaned, and grass and weeds cut. Improvements now on domain: Fencing and planting. Proposed operations for ensuing year: Completing planting, erecting a fence to protect trees, and building a pavilion. When in order the domain will be used for sports and picnics.

SOUTH MALVERN DOMAIN.

Section No. 1388, Block VII, Hororata Survey District. Area, 22 acres 3 roods.

Work done during year: Draining, fence-cutting, and gorse-grubbing. Used for sports. Proposed operations for ensuing year: Erecting swimming-bath.

SOUTH RAKAIA DOMAIN.

Reserves Nos. 2442 and 2986, Town of South Rakaia, and 2537, Block XIII, Rakaia Survey District. Area, 156 acres.

Work done during year: General maintenance. Improvements now on domain: Fences, well, pump, horse-yards, saddling-paddock, racecourse, swimming-bath and dressing-sheds, office, concrete cricket-pitches, running-track, rustic seats, and about 130 acres of plantation. Used for sports, picnics, races, and general recreation.

SPOTSWOOD DOMAIN.

Reserves Nos. 3714, 3157, and 3851, Spotswood Village, Block IV, Cheviot Survey District. Area, 14 acres 2 roods 27 perches.

Work done during year: Forest-trees planted on additional area, and land cropped with oats to raise funds for ploughing, levelling, and sowing in permanent pasture; wings of entrance-gates completed. Improvements now on domain: Fencing, iron gates with concrete posts, and plantation. Used for football, cricket, and general recreation. Portion leased. Proposed operations for ensuing year: Ploughing, levelling, and sowing additional area; re-erecting road fences, fencing plantations, and planting a further one.

SPREYDON DOMAIN.

Part of Rural Section No. 76, Blocks XIV and XV, Christchurch Survey District. Area, 17 acres 2 roods.

Work done during year: Ground cleared, ploughed, and cropped, old tree-stumps removed, and filling-in carried out. Improvements now on domain: Fencing, clearing, and Coronation Hall. Proposed operations for ensuing year: Ploughing, levelling, and planting.

SPRINGSTON DOMAIN.

Reserve No. 2362, Leeston Survey District. Area, 10 acres.

Improvements now on domain: Fencing, sod bank, building, asphalt tennis-court, and concrete cricket-pitch. Used for cricket, tennis, and general recreation. Leased.

ST. ANDREW'S DOMAIN.

Reserve No. 634, Otaio and Patiti Survey Districts. Area, 24 acres and 12 perches.

Work done during year: Pavilion concreted, trees trimmed, fences cut, and general maintenance. Improvements now on domain: Fencing, draining, plantations, pavilion, sports-ring, tennis-court, and 17 acres grassed. Used for sports, picnics, cricket, football, and tennis. Portion leased for grazing. Proposed operations for ensuing year: General maintenance.

TEMPLETON DOMAIN.

Reserves Nos. 2351 and 2418, and part Rural Section 1807, Block IX, and part Rural Section 1680, Block XIII, Christchurch Survey District; and part Rural Section 2737, Block XVI, Rolleston Survey District. Area, 245 acres.

Work done during year: Fences on principal domain trimmed, and new fence with gate erected round pavilion. Grass sports-track laid down on the Yaldhurst portion, and at Hornby tennis-courts laid down and pavilion erected. Improvements now on domain: Fencing, avenue of trees, tennis-courts, croquet-lawns, concrete cricket-pitches, entrance-gates, seats, and conveniences. Used for grazing, picnics, military encampments, and general recreation. Portion leased. Proposed operations for ensuing year: Planting, trimming fences, cleaning borders, and general maintenance.

TEMUKA DOMAIN.

Reserves Nos. 307, Town of Temuka, and 1561, Block XVI, Opihi Survey District. Area, 183 acres.

Work done during year: General maintenance. A local committee has, with the Board's sanction, undertaken a scheme for improving and beautifying the recreation-ground by laying out and forming paths and replanting the grounds. Good progress has been made, funds being provided by donations from the Mayor and Mayoress, public subscriptions, and the proceeds of a domain fête. The pioneers of the district have completed the erection of a drinking-fountain as a Coronation memorial. Improvements now on domain: Boundary-fences, iron-wicket gates and double gates for vehicles, caretaker's house, tennis-shed, drinking-fountain, swimming-bath with dressing-sheds, grandstand and offices, three tennis-courts, cycling-track, cricket-ground, bowling-green, croquet-court, and hockey and football grounds. The domain is largely used for picnics and various sports. Proposed operations for ensuing year: Removing overgrown and unsightly trees and replanting ground. The Domain Improvement Committee will continue the carrying-out of the scheme on which they are engaged.

TIMARU DOMAIN.

Part of Reserve No. 102, Suburbs of Timaru. Area, 8 acres 1 rood 18 perches.

Improvements now on domain: Grandstand, bicycle and dressing sheds, bicycle-track, caretaker's cottage, and iron fence. Used for sports, football, and band concerts. Leased to the South Canterbury Caledonian Society, which has effected the improvements on the domain.

TINWALD DOMAIN.

Part of Reserves Nos. 2378 and 2275, Block XVI, Westerfield Survey District. Area, 230 acres.

Work done during year: Swimming-pond and sports-track completed, noxious weeds kept down, fencing, and general maintenance. Improvements now on domain: Gorse, wire, and macrocarpa fences, pipe and open drains, grandstand and booth, three rooms for offices, pavilion, plantations, shrubs, tennis-court, lakelet with boat and boat-shed, swimming-pond, and sports-track with dressing-rooms and office. Used for cricket, tennis, boating, bathing, and general recreation. Portion leased. Proposed operations for ensuing year: Planting, eradicating noxious weeds, and general maintenance.

WAHI TAKARO DOMAIN.

Reserve No. 3716, Block VIII, Teviotdale Survey District. Area, 55 acres.

Work done during year: Earth carted on to domain, trees planted, and shed painted. Improvements now on domain: Two squares fenced off with wire netting and planted with trees, water-supply, and shelter-shed. Used for picnics, camping, bathing, and as a rifle range. Proposed operations for ensuing year: Planting trees, fencing, and laying down concrete floor in shed.

WAIAU DOMAIN.

Reserve No. 3505, Block XIII, Waiau Survey District. Area, 38 acres 3 roods 34 perches.

Work done during year: Trees planted, asphalt tennis-court laid down, noxious weeds kept in check, and fences repaired. Improvements now on domain: Fences, dressing-room, pavilion, tennis-courts, and plantations. Used for sports, tennis, football, and picnics. Proposed operations for ensuing year: Planting trees, clearing noxious weeds, and ploughing and resowing sports-ground.

WAIHORA PARK DOMAIN.

Reserve No. 2585, Block XIV, Halswell Survey District. Area, 200 acres.

Work done during year: Water-supply improved, racecourse formed and partly fenced, wash-house and boiler erected, and general maintenance. Improvements now on domain: Fencing, planting, levelling, flower-gardens, walks, water-supply, gates, caretaker's house, artesian wells, windmill, pond, fountain, pavilion, and sports-ground. Used for sports and general recreation. Leased. Proposed operations for ensuing year: Improving racecourse and sinking artesian well.

WAINUI DOMAIN.

Section No. 727, Block VII, Akaroa Survey District. Area, 1 acre 3 roods.

Improvements now on domain: Fencing, drains, trees, and grassing. Used as a children's playground, and for sports and picnics. Portion leased.

WAIKAKAHI DOMAIN.

Reserve No. 3459, Town of Morven. Area, 4 acres 1 rood 15 perches.

Work done during year: 7 chains of fencing and iron gate erected. Improvements now on domain: Tennis-court, trees, and fencing. Used for tennis and grazing.

WAITAKI NORTH DOMAIN.

Reserve No. 2915, Block XIV, Waitaki Survey District. Area, 57 acres.

Work done during year: Fences repaired. Improvements now on domain: Fencing, gates, well, windmill with fittings, pump, trough, and plantation. Used for sports and grazing. Leased. Proposed operations for ensuing year: General maintenance.

WEEDON DOMAIN.

Reserve No. 1596, Block XV, Rolleston Survey District. Area, 48 acres 2 roods 17 perches.

Work done during year: Fences trimmed, and gorse cut and grubbed. Improvements now on domain: Fencing, plantation, bathing-pond and shed, and cricket-pavilion. Used for cricket and picnics. Proposed operations for ensuing year: Repairing and trimming fences.

WEST MELTON DOMAIN.

Reserve No. 3789, Block XI, Rolleston Survey District. Area, 10 acres.

Work done during year: Ornamental fence and gates erected on domain frontage, cyclone wire fence erected round plantation, and dead trees replaced. Improvements now on domain: Fencing and plantation. Used for cricket, football, and picnics. Proposed operations for ensuing year: Cutting live fences and replacing failures in trees.

WINCHESTER DOMAIN.

Reserves Nos. 2402 and 2449, Block XIV, Geraldine Survey District. Area, 42 acres 1 rood.

Work done during year: Californian thistle and gorse grubbed. Improvements now on domain: Cricket and tennis pavilions, tennis and croquet courts, plantations, fences, hedges, and two windmills. Used for tennis, croquet, cricket, football, and shows. Portion leased. Proposed operations for ensuing year: General maintenance.

WOODBURY DOMAIN.

Reserve No. 1544, Orari and Geraldine Survey Districts. Area, 126 acres 2 roods 33 perches.

Work done during year: Hall improved, and general maintenance. Improvements now on domain: Fencing, draining, ploughing, Coronation Library Hall, two pavilions with dressing-room and lavatory, two asphalt tennis-courts, concrete cricket-pitch, concrete bath, roller, and plantation. Used for sports, school picnics, tennis, cricket, bathing, garden fêtes, and general recreation. Portion leased. Proposed operations for ensuing year: Draining, painting hall, and general maintenance.

WOODEND DOMAIN.

Reserves Nos. 2134, 2539, and 3728, Rangiora Survey District. Area, 268 acres 2 roods 3 perches.

Work done during year: Marram-grass and trees planted, fences and trees trimmed, and general maintenance. Improvements now on domain: Fences, levelling, trees, cricket-pavilion, asphalt tennis-courts, pump, artesian well, concrete tank, and pipes. Used for picnics, football, cricket, tennis, sports, and as a playground for children. Proposed operations for ensuing year: Planting marram-grass and trees, levelling ground, trimming trees and fences, and general improvements.

OTAGO LAND DISTRICT.

ALBERT TOWN DOMAIN.

Section No. 5, Block IV, Lower Wanaka Survey District. Area, 81 acres.

This domain is under the control of the Commissioner of Crown Lands, Dunedin. Leased on a year-to-year tenancy.

ALEXANDRA DOMAIN.

Sections Nos. 1 to 23, Block XI, and 1 to 22, Block XII, Town of Alexandra. Area, 10 acres 2 roods 5 perches.

Work done during year: About 300 ft. of 3 in. pipe laid and connected with borough mains, tennis-courts enclosed by iron and netting fence, and hedge planted. Improvements now on domain: Fencing, two asphalt tennis-courts, pavilion, and two plantations. Used for football, cricket, hockey, sports, tennis, and general recreation.

ALEXANDRA TOWN BELT DOMAIN.

The Town Belt, Town of Alexandra. Area, 160 acres 2 roods 17 perches.

Improvements now on domain: Fencing. Used for grazing.

ALLANTON DOMAIN.

Block XIII, Town of Allanton. Area, 7 acres and 33 perches.

Improvements now on domain: Fences and plantation. Leased for grazing.

ARROWTOWN DOMAIN.

Section No. 38, Block VII, Shotover Survey District. Area, 6 acres.

Work done during year: Trees cleaned. Improvements now on domain: Tennis-court and wood-and-iron shed. Used as tourist resort, and for cricket, tennis, football, hockey, sports, picnics, and military encampments.

BALCLUTHA DOMAIN.

Reserve No. 5, Town of Balclutha. Area, 1 acre.

Improvements now on domain: Fences, pavilion, band-rotunda, shrubs, windmill, tennis-courts, and bowling-green. Used for bowls, tennis, and general recreation.

BASTINGS DOMAIN.

Sections Nos. 1, 2, 48, 49, and 50, Block 1, Town of Bastings. Area, 1 acre 1 rood 14 perches.

Improvements now on domain: 5 chains boundary-fence. Leased, the lessee being required to eradicate all noxious weeds.

BERWICK DOMAIN.

Section No. 10, Block IX, Town of Berwick. Area, 4 acres.

Work done during year: Weeds cut, fences repaired, and ground cleared of broom. Improvements now on domain: Fencing, shelter-shed, and plantations. Used for sports, picnics, and grazing. Proposed operations for ensuing year: Painting shed and erecting a new gate. Leased.

CLINTON DOMAIN (PART OF).

Section No. 82, Block XI, Pomahaka Survey District. Area, 132 acres.

This portion of Clinton Domain is under the control of the Commissioner of Crown Lands, Dunedin. No work has been undertaken.

CLINTON DOMAIN (PART OF).

Section No. 1, Block XXVI, Town of Clinton. Area, 18 acres and 36 perches.

Work done during year: Noxious weeds eradicated and fences repaired. Improvements now on domain: Grandstand, macrocarpa hedge, and 10 chains fencing. Used for sports, football, cricket, picnics, and Territorial encampments. 7 acres leased.

CLYDE DOMAIN.

Sections Nos. 38, 39, and 48, Block XI, 1 to 33, Block IV, 1 to 22, Block V, 1 to 22, Block VI, 1 to 33, Block VII, 1, Block LVI, and 1, Block LVII, Town of Clyde. Area, 63 acres 3 roods 21·5 perches.

Improvements now on domain: Fencing, plantation, and water-service. Used for sports, cricket, football, tennis, golf, and general recreation. Proposed operations for ensuing year: Further extending the plantation.

CROMWELL DOMAIN.

Section No. 1, Block XV, Town of Cromwell, and the Cromwell Town Belt. Area, 231 acres.

Improvements now on domain: Fencing, 11 acres plantation, pavilion, and conveniences. Used for sports, cricket, football, and general maintenance.

DUNEDIN DOMAIN.

Part of Dunedin Town Belt. Area, 52 acres and 6 perches.

Work done during year: New orchid-house erected and furnished, cart and implement shed built, permanent electric lighting fitted up, rustic bridges rebuilt, herbaceous and shrubbery borders formed, and rose-garden extended. Improvements now on domain: Superintendent's house, watchman's house, winter-garden, two propagating-houses, plant-frames, bush-house, fernery, tool-house, band-rotunda, bridges, running-track, aviary, deer-pen, gates, seats, cloak-room, summer-house, rock-garden, maze, plantations, flower beds and borders, potting-shed, and paths. Used as a botanic garden, and for cricket, football, sports, picnics, and band-concerts. Proposed operations for ensuing year: Extending the rose-garden and shrubbery borders, planting and fencing the arboretum, forming new paths, and erecting an office.

DUNROBIN DOMAIN.

Section No. 31, Block VIII, Crookston Survey District. Area, 12 acres.

Work done during year: Shelter-trees planted and fenced. Improvements now on domain: Plantation, fencing, and grassing. Used for cricket, football, and general recreation. Leased. Proposed operations for ensuing year: Erecting a shelter-shed.

DUNTROON DOMAIN.

Section No. 23, Block IV, Maruwenua Survey District. Area, 80 acres.

Work done during year: Gorse cut and rabbits kept down. Improvements now on domain: 33½ chains of rabbit-proof fencing, 500 yards of wire fencing round sports-ring, conveniences, and trees. Used as a rifle range, and for sports, picnics, and grazing.

GLENORCHY DOMAIN.

Section No. 1, Block XX, Town of Glenorchy. Area, 23 acres and 37 perches.

Work done during year: Portion fenced, cleared, and now under cultivation by the lessee. Improvements now on domain: Fencing. Used for sports, cricket, and football. Proposed operations for ensuing year: Planting trees.

GORE DOMAIN.

Situated in Towns of Gore and East Gore. Area, 97 acres 2 roods 0·42 perches.

Work done during year: General maintenance. Improvements now on domain: Fencing, plantations, gardens, two bowling-pavilions and two bowling-greens, tennis-pavilion and six tennis-courts, one golf-pavilion and golf-links, tool-shed, and glasshouse. Used for sports, picnics, bowls, tennis, golf, and general recreation. Portion leased.

GREEN ISLAND DOMAIN.

Part of Section No. 1, Block XIV, Dunedin and East Taieri Survey Districts. Area, 372 acres 2 roods 31 perches.

Nil report furnished.

GREENWICH SQUARE DOMAIN.

Section No. 18, Block VI, Town of Waihola. Area, 1 acre 1 rood 11 perches.

Improvements now on domain: Fencing, grassing, gates, macrocarpa hedge, and gravel paths. Used for general recreation, and part is utilized as a school-garden.

HAWEA DOMAIN.

Section No. 19, Block IV, Lower Hawea Survey District. Area, 107 acres 1 rood 8 perches.

Work done during year: General maintenance. Improvements now on domain: Fencing, iron gates, plantation, horse-yard, booth, and racing-track. Used for sports, picnics, and races. Leased. Proposed operations for ensuing year: Fencing.

HERIOT DOMAIN.

Section No. 2, Block I, Town of Heriot. Area, 9 acres 3 roods 9 perches.

Work done during year: Trees planted and conveniences erected. Improvements now on domain: Fences and building. Used for sports, picnics, cricket, football, and grazing. Leased.

HYDE DOMAIN.

Sections Nos. 51, 52, 54, 55, 57, and 58, Block VII, Rock and Pillar Survey District. Area, 79 acres 2 roods 29 perches.

Work done during year: Rabbit-proof fence erected, and ground prepared and 1,250 trees planted. Improvements now on domain: Fencing, racecourse, plantations, and grassing. Used for races and as a rifle range. Leased. Proposed operations for ensuing year: Planting trees.

KAITANGATA DOMAIN.

Sections Nos. 1 to 15, Block XXVI, and 5, Block XLVI, Town of Kaitangata. Area, 68 acres 1 rood 38 perches.

Improvements now on domain: Fences, hedges, gates, drains, plantations, lawns, walks, tennis-courts, grandstand, pavilions, and swimming-bath. Used for sports, football, cricket, tennis, bathing, and picnics. Portion leased.

KARITANE DOMAIN.

Sections Nos. 7, 8, 10, 11, 12, 13, 14, and 15, Block IX, and 2, Block XXIV, Town of Waikouaiti, and 24, Block VI, Hawksbury Survey District. Area, 37 acres 1 rood 4 perches.

Work done during year: Jetty at Karitane completely rebuilt with new timber, and trees planted on Arbor Day. Improvements now on domain: Plantations, fencing, protective works, flood-gate, marram-grass, and well. Used for picnics and general recreation. Portion leased.

KELSO DOMAIN.

Sections Nos. 13 to 17, Block III, Town of Kelso. Area, 11 acres 2 roods 15 perches.

Work done during year: Cricket-pitch formed, gates erected, and stumps of fallen trees removed. Improvements now on domain: Plantations, well, and cricket-pitch. Used for sports and picnics. It is proposed when labour is available to repair and move the grandstand to a more commanding position, to plough and level ground where trees were removed, and to form a running-track on the high ground.

KUROW DOMAIN.

Allotment No. 2A of Subdivision of parts of Sections Nos. 5 and 14, Block I, and 10 and 11, Block IV, Kurow Survey District. Area, 12 acres 1 rood 13·8 perches.

Improvements now on domain: Fencing, swing gate, ploughing, and grassing.

LAUDER DOMAIN.

Section No. 2, Block III, Lauder Survey District. Area, 200 acres.

Work done during year: Boundary-fence wire-netted, and racecourse disced, rolled, mowed, and holes filled in. Improvements now on domain: Fencing, gates, boat on lake, grandstand, totalizator-house, judge's box, paddocks fenced off, water-race, and plantations. Used for races and coursing. Leased.

LUMSDEN DOMAIN.

Sections Nos. 1 to 6, Block XXIII, Town of Lumsden. Area, 19 acres 1 rood 4 perches.

Work done during year: General maintenance. Leased.

MAHENO DOMAIN.

Part of Section No. 2 of 22, Block VII, Oamaru Survey District. Area, 47 acres 3 roods 19 perches.

Improvements now on domain: Fencing, plantations, creamery, dwelling, windmill, water-trough, and tennis-court. Used for football, golf, picnics, and grazing.

MAUNGATUA DOMAIN.

Section No. 22, Block XI, Maungatua Survey District. Area, 566 acres.

Used for picnics and grazing.

MID-WAKATIPU DOMAIN.

Section No. 39, Block IV, Mid-Wakatipu Survey District. Area, 400 acres.

This domain is under the control of the Commissioner of Crown Lands, Dunedin. No works have been undertaken.

MOA FLAT AND ETTRICK DOMAIN.

Section No. 44, Block I, Benger Survey District. Area, 420 acres.

Reservation cancelled by section 62 of the Reserves and other Lands Disposal and Public Bodies Empowering Act, 1912, and domain declared ordinary Crown land.

MOERAKI DOMAIN.

Sections Nos. 15, Block II, 13, Block III, and 4, 5, 6, and 7, Block XIV, Town of Moeraki. Area, 23 acres 3 roods 34 perches.

Work done during year: A hall has been erected on the domain to commemorate the coronation of His Majesty King George V. Improvements now on domain: Hall, fencing, and trees. A portion of the domain is leased. Proposed operations for ensuing year: Levelling a portion of domain for a sports and picnic ground.

NASEBY DOMAIN.

Section No. 23, Block I, Naseby Survey District. Area, 120 acres.

Improvements now on domain: Grandstand, racing-track, and fencing. Used for racing.

OCEAN BEACH DOMAIN.

Sections Nos. part 28 and 31, Block VII, Otago Peninsula Survey District, and 4 and 6, Block XII, Dunedin and East Taieri Survey Districts. Area, 221 acres 2 roods 11 perches.

Work done during year: 1½ acres of lagoon at St. Kilda filled up by manual labour. The surface was sown with lupins, which have completely covered the area. Other work consisted of keeping tracks free of lupin and grass, cutting grass among young trees, planting about 3 acres of marram-grass toward the eastern end of the lagoon, scrub fencing, planting marram-grass on the sea side of sand-dunes, and cutting lupin to prepare for planting trees. Proposed operations for ensuing year: Continuing reclamation, lengthening road seawards at St. Kilda, covering about half a mile of sand-tracks with clay and rotten rock, making more tracks through the lupins, and planting shrubs and trees on prepared areas. [NOTE.—This report is for the year ended 31st March, 1913.]

OTOKIA DOMAIN.

Section No. 47, Block I, Otokia Survey District. Area, 12 acres 2 roods.

Improvements now on domain: Planting, fencing, post-and-chain stand for horses, notice-board, and lifebuoy and line. Used for grazing, picnics, and sports.

OUTRAM DOMAIN.

Sections Nos. 31 and 32, Block VII, Maungatua Survey District, and 14 to 20 and 22, Block I, and 7, Block XV, Town of Outram. Area, 402 acres 1 rood 5 perches.

Work done during year: New tennis-court laid down. Improvements now on domain: Buildings, plantations, hedges, fences, swings, seats, pump, tennis-courts, bowling-green, and water-supply. Used for bowls, tennis, football, sports, cycling, picnics, general recreation, and grazing. Proposed operations for ensuing year: Erecting a shelter-shed.

OWAKA TOWNSHIP DOMAIN.

Section No. 111 (formerly part of Section No. 3), Block VIII, Glenomaru Survey District. Area, 3 acres 3 roods 0·8 perches.

Improvements now on domain: Fencing, tennis-court, and dressing-shed. Used for sports, shows, tennis, football, and picnics.

PALMERSTON DOMAIN.

Sections Nos. 5 to 18, Block XVI, Town of Palmerston. Area, 3 acres 2 roods.

Work done during year: Fences repaired. Improvements now on domain: Boundary-fence. Used for cricket, football, and general recreation.

POUNAWEA DOMAIN.

Sections Nos. 31, 53, 54, 55, 58, 59, 60, and 61, and a Closed Road, Block VI, Glenomaru Survey District. Area, 13 acres 1 rood 16 perches.

Work done during year: Stumping. Improvements now on domain: Fencing, gate, clearing, and grassing. Used for camping and picnics; also by tourists.

QUEENSTOWN DOMAIN.

Blocks LIV, LV, and LVI, Town of Queenstown. Area, 7 acres and 19 perches.

Work done during year: About half of the domain fenced and planted with suitable trees and shrubs. Improvements now on domain: Fencing and planting. Used for forestry purposes. Proposed operations for ensuing year: Fencing and planting the remaining portion of the domain.

RANFURLY DOMAIN.

Sections Nos. 1 to 15, Block XIII, Town of Ranfurly. Area, 10 acres 2 roods 36 perches.

Proposed operations for ensuing year: Erecting wire netting and planting trees.

RECORD REIGN DOMAIN.

Section No. 1, Block LXXXIX, Town of Cromwell. Area, 4 acres.

Work done during year: The bowling club carried out improvements to the surroundings of the bowling-green. Improvements now on domain: Fencing, bowling-green, tennis-courts, seats, conveniences, and trees. Proposed operations for ensuing year: General maintenance.

ROSLYN DOMAIN.

Section No. 7, Block X, Dunedin and East Taieri Survey District. Area, 12 acres 2 roods 28 perches.

The domain is let for grazing.

ST. BATHAN'S DOMAIN.

Section No. 25, Block II, St. Bathan's Survey District. Area, 23 acres 1 rood 5 perches.

Improvements now on domain: Fencing, gates, trees, hedge, curling and skating pond, football and cricket grounds, and running-tracks. Used for sports and general recreation. Leased. Proposed operations for ensuing year: Further clearing broom and repairing fences.

TAIERI LAKE DOMAIN.

Sections Nos. 12 and 18, Block XI, and 2, Block XII, Maniototo Survey District, and 67 and 81, Town of Komako. Area, 436 acres and 39 perches.

Work done during year: Fencing erected, and 7,000 forest-trees planted. Improvements now on domain: Fencing and trees planted. Used for grazing and general recreation. Proposed operations for ensuing year: Further planting of trees and improving sports-ground.

TE ANAU DOMAIN.

Section No. 48, Block VII, Waiau Survey District. Area, 2 acres and 29 perches.

This domain is under the control of the Tourist Department. Used as a scenic reserve.

TOKOMAIRIRO DOMAIN.

Parts of Sections Nos. 103 and 104, Block XII, Tokomairiro Survey District. Area, 47 acres and 4 perches.

Work done during year: Fences cut and trimmed, flowers and shrubs planted, and flower-beds and paths maintained in good order. Improvements now on domain: Fences, pavilion, plantation, ponds, paths, and flower-beds. Used for football, cricket, hockey, and picnics. Proposed operations for ensuing year: Planting trees, shrubs, and flowers, and general maintenance. A portion of the domain is leased.

TROTTER'S CREEK DOMAIN.

Section No. 36, Block XI, Moeraki Survey District. Area, 183 acres and 11 perches

Improvements now on domain: Footbridge, seats, and tracks. Used for sports and as a playground for children. Leased.

TUAPEKA DOMAIN.

Blocks XV, XVI, XVIII, XIX, XXXV, Sections Nos. 1 to 8, 10 and 13 to 16, Block XIV, 1 to 7, and 20, Block XVII, 1 to 6 and 17 and 18, Block XXXIV, 6, Block LIII, 3, 4, 5, and 9, Block LIV, and three areas containing 1 rood, 2 roods 35 perches, and 3 roods 24 perches respectively, Town of Lawrence, and Sections Nos. 20, 26, and 30, Block XIX, Tuapeka East Survey District. Area, 133 acres 3 roods 20 perches.

Work done during year: Bulbs and flowering-plants planted, and fresh ground prepared; railway section improved by planting shrubs, &c.; fences and paths attended to, and general maintenance. The Reservoir Hill is now extensively patronized as a recreation and holiday resort. Improvements now on domain: Fencing, plantations, and paths. Used for hockey, cricket, football, shows, military encampments and parades, and as a pleasure resort. Portion leased. Proposed operations for ensuing year: Further tree-planting, and protecting same with fences.

WAIHEMO DOMAIN.

Section No. 74, Block IV, and parts of Sections Nos. 56 and 58, Block X, Moeraki Survey District. Area, 139 acres 1 rood 5 perches.

Work done during year: Sports-track practically completed, and attention given to trees and shrubs. Improvements now on domain: Fencing, shrubberies, and sports-track. Used for general recreation. A portion is leased. Proposed operations for ensuing year: Sowing down walks and planting shrubs.

WAIKOUAITI DOMAIN.

Situated in Town of Hawksbury. Area, 462 acres 2 roods 26 perches

Work done during year: Filling in on racecourse and recreation-ground, and tree-planting. Improvements now on domain: Canal and connecting drains, fencing, plantations, embankments, bridges, pavilion, bowling-green, and tennis-courts. Used for sports, races, picnics, bowling, tennis, cricket, football, hockey, and grazing. Proposed operations for ensuing year: Further filling in.

WAIPAHI DOMAIN.

Section No. 14, Block VII, Town of Waipahi. Area, 5 acres 2 roods 16 perches.

Work done during year: Fences repaired. Improvements now on domain: Fencing and trees. Used for picnics and general recreation.

WAITAHUNA DOMAIN.

Section No. 21, Block XXXII, Town of Havelock. Area, 5 acres 1 rood 32 perches.

Work done during year: New stile erected, gorse and broom grubbed, and fence trimmed. Improvements now on domain: Fencing, plantation, and tennis-court. Used for football, cricket, tennis, sports, and picnics.

WANAKA ISLANDS DOMAIN.

Manuka or Pigeon Island, Crescent or Rabbit Island, the island in Stevenson's Arm, and Merino or Roy's Island, all in Lake Wanaka; Sections Nos. 1, Block XIII, and 29, Block XIV, Lower Wanaka Survey District; and 1 to 4, Block XIV, 1 to 3, Block XV, 1 to 6 and 8 to 14, Block XVI, and 1 to 16, Block XVII, Town of Pembroke. Area, 1,007 acres 2 roods 30 perches.

Work done during year: Land bordering the Town Creek section reclaimed and a stone wall erected for protection from floods; a swampy portion adjoining the post-office area also reclaimed. Improvements now on domain: Huts, fencing, wharves, marram-grass, and trees. Used for sports, picnics, and as a nature-study ground. Portion leased. Proposed operations for ensuing year: Planting Town Creek portion with flowers and shrubs, also planting on post-office section and on Manuka Island.

WANGALOA DOMAIN.

Part of Section No. 8, Block VII, Coast Survey District. Area, 32 acres 3 roods 13 perches.

Improvements now on domain: Fences, drains, and plantations. Used for picnics and sports.

WILLSHER DOMAIN.

Sections Nos. 1, 3, and 4 of 16, and an intersecting road-line, Block VII, South Molyneux Survey District. Area, 14 acres and 39 perches.

Work done during year: Tracks made and seats erected. Improvements now on domain: Fencing, draining, racing-track, tennis-court, and trees. Used for sports, tennis, and picnics.

SOUTHLAND LAND DISTRICT.

BRYDONE DOMAIN.

Section No. 152E, Block II, Brydone Village. Area, 4 acres 3 roods.

Work done during year: Thistles cut, gorse grubbed, fences repaired, and general maintenance. Improvements now on domain: Fencing and plantation. Used for cricket, football, and general recreation. Proposed operations for ensuing year: Erecting a shelter-shed and replacing failures among trees.

CALCIUM DOMAIN.

Sections Nos. 16 and 17, Block I, Town of Calcium. Area, 3 roods 36 perches.

Work done during year: Gorse grubbed and culvert put in at gateway. Improvements now on domain: Fencing, gate, and trees. The domain provides access to the public hall.

CLIFDEN DOMAIN.

Section No. 5, Block I, Lillburn Survey District. Area, 73 acres 3 roods 3 perches.

Work done during year: Scrub cleared and gate erected. Improvements now on domain: Fencing, draining, grassing, racecourse, and building. Used for picnics, sports, and racing. Proposed operations for ensuing year: Cutting scrub.

CROYDON BUSH DOMAIN.

Sections Nos. 895, Block LXVII, and 819, 885, 896, and 927, Block LXIX, Hokonui Survey District. Area, 1,844 acres 2 roods 27 perches.

Improvements now on domain: Fencing and bush tracks. Used for picnics. The whole of the area is covered with native bush.

DIPTON DOMAIN.

Section No. 3, Block X, Town of Dipton. Area, 5 acres.

Improvements now on domain: Fencing, grassing, shelter-shed, concrete well, outhouses, and trees. Used for sports, picnics, and general recreation.

EDENDALE DOMAIN.

Part of Lot 235, portion of Original Section No. 7, Block II, Mataura Hundred. Area, 5 acres.

A bazaar and concert held in aid of the domain funds returned a profit of about £100, enabling the Board to materially reduce their overdraft. Improvements now on domain: Fencing, gates, tennis-court, pavilion, and trees. Used for sports, tennis, cricket, and football. Leased.

FORTROSE DOMAIN.

Section No. 42, Block IV, Town of Fortrose. Area, 10 acres.

Improvements now on domain: Plantation, hut, and fencing. The domain is used for sports, picnics, and grazing. Proposed operations for ensuing year: Erecting new gates and repairing fences.

HAPPY VALLEY DOMAIN.

Section No. 7, Block III, Waikaia Survey District. Area, 55 acres 2 roods.

Improvements now on domain: Fencing and gates. Used for cricket, football, races, and picnics. Leased. Proposed operations for ensuing year: Planting trees and fencing them off.

HEDGEHOPE DOMAIN.

Section No. 344, Block IV, Forest Hill Hundred. Area, 10 acres.

Work done during year: Clearing, grubbing, and fencing. Improvements now on domain: Fencing, clearing, and ploughing. Proposed operations for ensuing year: Fencing and ploughing.

HIRSTFIELD DOMAIN.

Sections Nos. 1, Block X, 4, Block XI, and 1, Block XVII, Town of Hirstfield. Area, 23 acres and 24 perches.

Work done during year: Sports-ground rolled and netted in. Improvements now on domain: Fencing, grassing, bowling-green, tennis-courts, and shelter-trees. Used for sports, football, bowls, tennis, and general recreation. Portion leased for grazing.

HOWELL'S POINT DOMAIN.

Portions of Sections Nos. 22 to 28, Block II, and Sections Nos. 46 to 48, Block I, and 20, Block II, Jacob's River Hundred. Area, 105 acres 3 roods 30 perches.

Improvements now on domain: 39 chains of fencing. Used for picnics. Portion leased.

JOEY'S ISLAND DOMAIN.

Section No. 12, Block XII, Campbelltown Hundred, being the island in Awarua Bay known as Joey's Island. Area, 28 acres 1 rood.

No works undertaken.

LIMEHILLS DOMAIN.

Sections Nos. 1 to 7 and 8 to 17, Block IV, and 1 to 19, Block XXI, Town of Limehills. Area, 12 acres 2 roods 33 perches.

Work done during year: Asphalt tennis-court laid down and conveniences erected. Improvements now on domain: Fencing, draining, trees, shed, asphalt cricket-pitch, and tennis-court. Used for cricket, tennis, sports, and grazing. Leased. Proposed operations for ensuing year: Repairing fences, trimming trees, and general maintenance.

MAKAREWA DOMAIN.

Section No. 1, Block VIII, Town of Makarewa. Area, 13 acres and 18 perches.

The domain has been fenced, cleared, ploughed, and grassed. A portion is open to the public for recreation purposes.

MATAURA DOMAIN.

Sections Nos. 39, 40, and 41, Block XVII, Town of Mataura Bridge, and 13, Block XII, Town of Mataura. Area, 18 acres 1 rood 18 perches.

Work done during year: Buildings painted and repaired, stand erected for the use of bands, seats placed in various parts of the domain, trees trimmed and lopped, and grounds generally maintained. Improvements now on domain: Fencing, trees, hedges, and grandstand. Used for sports, cricket, football, and picnics. Portion leased.

OMAUI DOMAIN.

Section No. 69, Block V, Campbelltown Hundred. Area, 158 acres 2 roods 29 perches.

The domain is situated in rather an isolated part of the New River Estuary, and is covered with native bush, which is being protected.

OTAUTAU DOMAIN.

Part of Section No. 5, Block II, Aparima Hundred, and Section No. 8 and part of Section No. 11, Block VII, Town of Otautau. Area, 65 acres 2 roods 13 perches.

Work done during year: Fencing and clearing. Improvements now on domain: Fencing, road, trees, and grassing. Used for recreation and for grazing. Proposed operations for ensuing year: Fencing and tree-planting.

PUKERAU DOMAIN.

Sections Nos. 8 to 11, Block V, Town of Pukerau. Area, 4 acres.

Improvements now on domain: Fencing, grassing, and plantations. Used for sports, cricket, and picnics. Leased for grazing.

RIVERTON DOMAIN.

Sections Nos. 18, 19, 21, 22, 23, and part 24, Block XXV, Jacob's River Hundred. Area, 10 acres 1 rood 34 perches.

Work done during year: Fences repaired. Improvements now on domain: Fencing, plantation, cottage, caretaker's hut, and ticket-office. Used for sports, picnics, football, and cricket. Portion leased.

SOUTH INVERCARGILL DOMAIN.

Section No. 33A, Block I, Town of Seaward Bush. Area, 2 acres 2 roods 35 perches.

Work done during year: Pavilion erected by Recreation Committee. Improvements now on domain: Clearing, stumping, fencing, levelling, grassing, and pavilion. Used for cricket, football, and general recreation.

TOKONUI DOMAIN.

Sections Nos. 9 to 15, Block II, Town of Tokonui. Area, 4 acres 3 roods 19 perches.

Improvements now on domain: Fencing and grassing. Used for sports. Leased on improvement conditions.

WAIKAIA DOMAIN.

Sections Nos. 1 to 22, Block IV, Town of Waikaia. Area, 5 acres 2 roods.

Work done during year: Fences repaired. Improvements now on domain: Fencing, bicycle-track, and tennis-courts. Used for cricket, football, cycling, tennis, and sports. Leased.

WYNDHAM DOMAIN.

Section No. 66 and a lagoon of 12 acres in Block VI, Town of Wyndham. Area, 25 acres.

Work done during year: Fences and gates repaired. Improvements now on domain: Trees, shrubs, flowers, fencing, drainage, promenade, and seats. Used as a public resort. Proposed operations for ensuing year: Planting, fencing, forming walks, and general improvements.

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1913.
NEW ZEALAND.

RANGITAIKI LAND DRAINAGE:

REPORT FOR THE YEAR ENDED 31st MARCH, 1913; TOGETHER WITH STATEMENT OF ACCOUNTS.

Presented to both Houses of the General Assembly pursuant to Section 10 of the Rangitaiki Land Drainage Act, 1910.

Sir,—
Department of Lands and Survey, Wellington, 2nd June, 1913.

I have the honour to submit herewith the report upon the drainage operations in the Rangitaiki Plains for the year ended 31st March, 1913, pursuant to the provisions of the Rangitaiki [illegible]age Act, 1910.

The [illegible] affected by the Act is 87,100 acres, the greater part of which is either freehold, leasehold, or Native land.

Great difficulty was experienced during the year with the cutting of the Rangitaiki River diversion canal, let to Messrs. Rich and Jeffreys, who finally abandoned the work, which is now being proceeded with by the Land Drainage Branch of this Department, as well as the remaining works in progress.

I visited and inspected the operations during November and satisfied myself that the officers in charge and their parties are carrying out the varied works entrusted to them in a highly efficient manner.

The expenditure up to date has been as follows:—

	£	s.	d.
For the year ended 31st March, 1912	12,140	0	0
" " 1913	15,203	0	0
Total	£27,343	0	0

The detailed report of the Land Drainage Engineer (Mr. J. B. Thompson) sets forth the nature of the operations undertaken and proposed. To that officer and his assistant (Mr. O. N. Campbell), together with their staffs, the greatest credit is due.

The accompanying statement of accounts shows the expenditure for the year.

I have, &c.,
John Strau[illegible]hon,
U[illegible]er-Secretary for Lands.

The Hon. W. F. Massey, Minister of Lands.

STATEMENT OF ACCOUNTS (AS REQUIRED BY SECTION 10 OF THE RANGITAIKI LAND DRAINAGE ACT, 1910) FOR THE YEAR ENDED 31ST MARCH, 1913.

Receipts.	£	s.	d.
1st April, 1912.			
To Balance—Cash in Public Account ..	14,180	9	10
31st March, 1913.			
Rates received under section 7 of the Rangitaiki Land Drainage Act, 1910	1	7	6
"Thirds," &c., received under section 9 of the Rangitaiki Land Drainage Act, 1910	620	3	1
Advance made by New Zealand State-guaranteed Advances Office	10,000	0	0
	£24,802	0	5

Expenditure.	£	s.	d.
31st March, 1913.			
By Expenditure—			
Payments for liabilities of old Board—			
Redemption of debentures ..	2,000	0	0
Interest on debentures	100	0	0
Contracts let by old Board ..	219	5	7
New works by contract and day labour	7,184	5	11
Purchase and maintenance of dredges	5,509	11	5
Travelling allowances and expenses, camp allowances, and general administration expenses	190	3	1
Balance—Cash in Public Account ..	7,914	8	2
Advances in hands of Government officers	1,684	6	3
	£24,802	0	5

LOAN ACCOUNT.

31st March, 1913.	£	s.	d.
To Balance	34,293	15	0
	£34,293	15	0

31st March, 1913.	£	s.	d.
By Advances made by the New Zealand State-guaranteed Advances Office—			
No. 1 Loan—Balance	24,293	15	0
No. 2 ,, ,, ...	10,000	0	0
	£34,293	15	0

REPORT OF THE LAND DRAINAGE ENGINEER.

SIR,—

I have the honour, in accordance with the provisions of the Rangitaiki Land Drainage Act, 1910, to report upon the various operations carried out during the past financial year.

These works are now well in hand, and the benefits that will result from the scheme of drainage are fast becoming apparent. The country (particularly the southern half) is being rapidly unwatered and turned into pasture land, a noticeable feature being the sweetness of the country and the ease with which it is "brought in." Settlers are as yet mostly engaged in cattle raising and fattening (the swamp being already noted for its fat bullocks), but the whole area must eventually become dairying-country. A cheese-factory has already been opened on the co-operative system, the suppliers being all swamp settlers, and the butter-factories at Matata and Whakatane are each drawing supplies of cream from settlers on the swamp lands.

Owing to the slow progress and eventual abandonment of the Rangitaiki River dive[illegible] let to Messrs. Rich and Jeffreys, and the various unavoidable delays [illegible]curing the necessary dredging machinery, little actual work has as yet been done on the main outfalls. However, as will be seen hereafter, works are now well in train, and, judging from results obtained from the minor works executed, I am expecting big changes during the coming year, and look forward with more confidence than ever to the ultimate complete success of the scheme.

PRIESTMAN DREDGERS.

As mentioned in my last report, the Department, realizing the inability to let certain works by contract, decided to install the necessary machinery and carry out its own work. Accordingly two grab dredgers were ordered from Messrs. Priestman Limited, England—one by letter in November, 1911, and the other by cable in January, 1912. Unfortunately, before these orders were completed the 1912 epidemic of strikes started in the Old Country, causing a most unlooked-for delay of eight months in completing the order. However, these machines have now arrived, being transhipped from Auckland by auxiliary scows. One was landed in Whakatane at the end of January last, and was safely carted some eight miles back into the swamp to Mangaroa, duly erected, and is now in commission on Te Rahu – Mangaroa outfall. The other was landed in Matata some three weeks ago. It was primarily intended for the Tarawera River improvement-works, but, owing to the abandonment of the Rangitaiki River diversion contract, it was decided to start the plant at the "outlet," this being the more important work. No time was lost in towing the plant some nine miles up the Rangitaiki River to the site of the works, and it is now erected and a start made with the excavation.

These are most efficient plants of the latest model, and I am hoping to be in a position to report their good progress in my next annual report.

TARAWERA RIVER.

The Hammond po[illegible] bucket dredge has been engaged throughout the year on the Tarawera River improvement-works, cutting off bends and generally enlarging and improving the channel. Fair progress has been maintained, considering the difficulties to be contended with. Some 31,486 cubic yards of spoil has been [illegible]avated, at a cost of 4⅛d. per cubic yard. The old bend has been cut and the old channel is complete[illegible]ilted up. The second cut is well in hand, and when opened up will effect a lowering of approxim[illegible]8 in. in the water-level. I still feel confident that our estimate of lowering the surface level of w[illegible]this river by 1 ft. per mile for the first five miles will be accomplished.

THE BEND, RANGITAIKI RIVER (DOWN-STREAM).

THE BEND, RANGITAIKI RIVER (UP-STREAM).

Dredge No. 4, Rangitaiki River Diversion.

Dredge No. 4, Rangitaiki River Diversion.

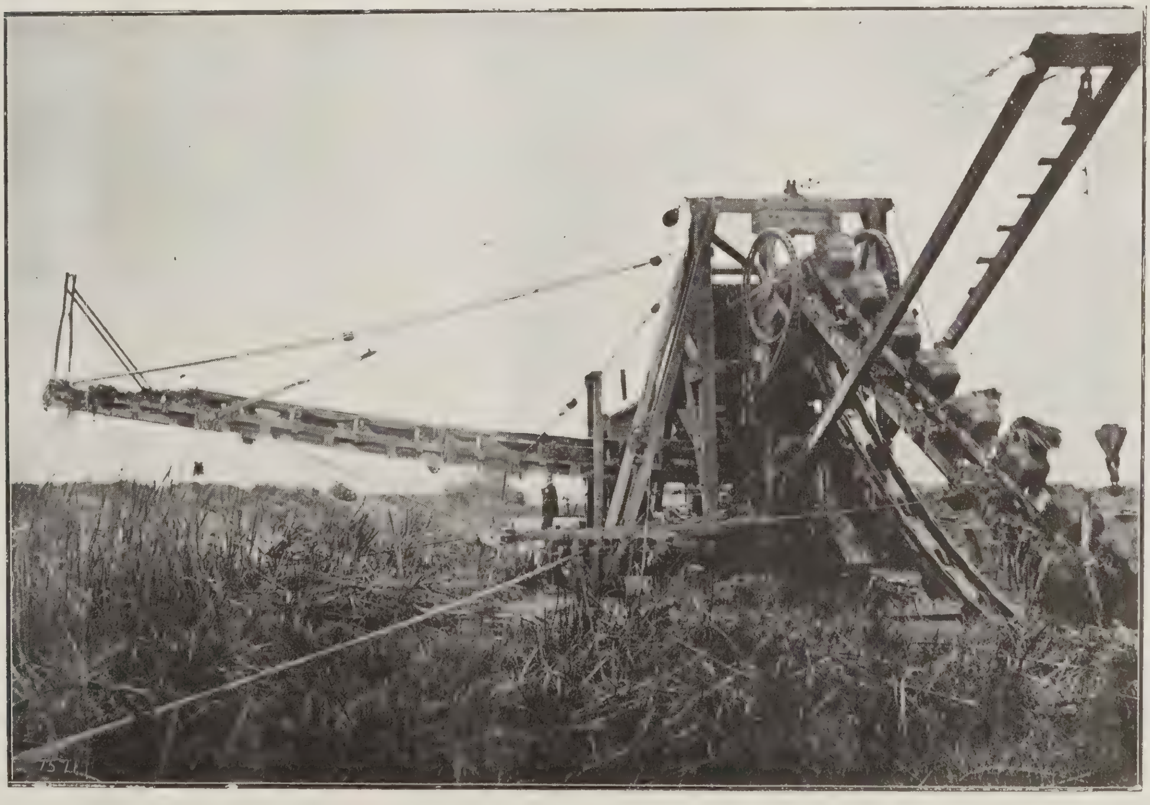
DREDGE NO. 4, RANGITAIKI RIVER DIVERSION.

RANGITAIKI RIVER DIVERSION.—SCOOP TEAMS AT WORK ON EXCAVATION OF SANDHILLS.

Rangitaiki River Diversion.—Scoop Teams excavating Sandhills.

Wheel Scoops on Sand-dunes.

Rangitaiki River Diversion.—Stop-bank under Construction.

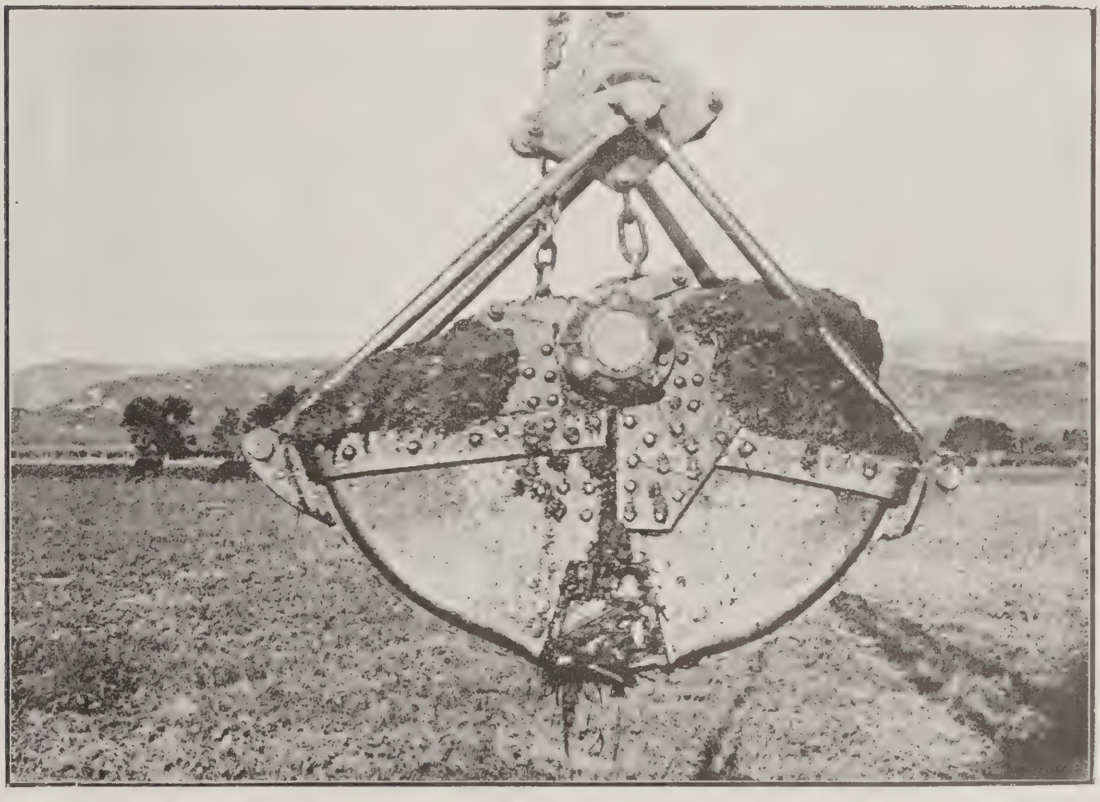


Hammond Pony Dredge.

Mangaroa - Te Rahu Outfall.—Dredge No. 3 at New Mangaroa Bridge.

Dredge No. 3, Mangaroa - Te Rahu Outfall.

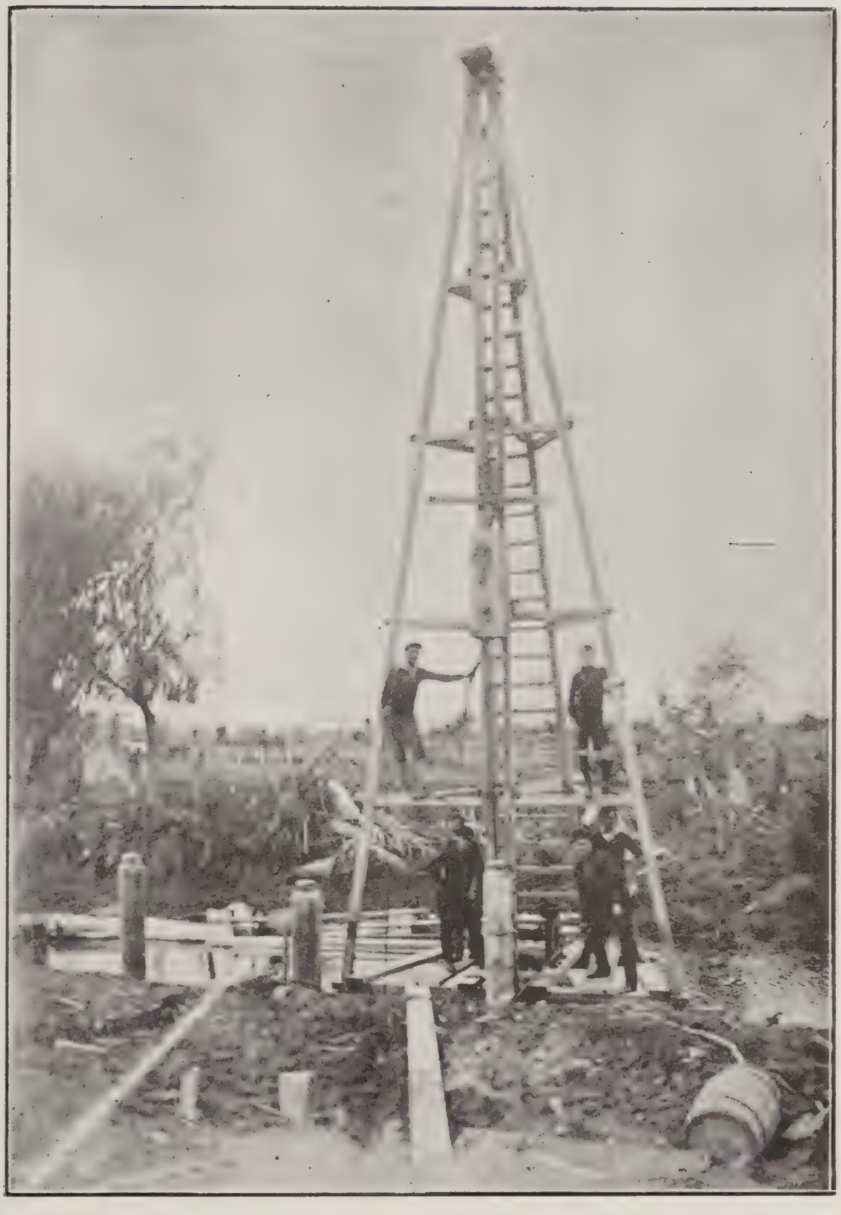
Mangaroa-Te Rahu Outfall.—Dredge No. 3 excavating in Distance.



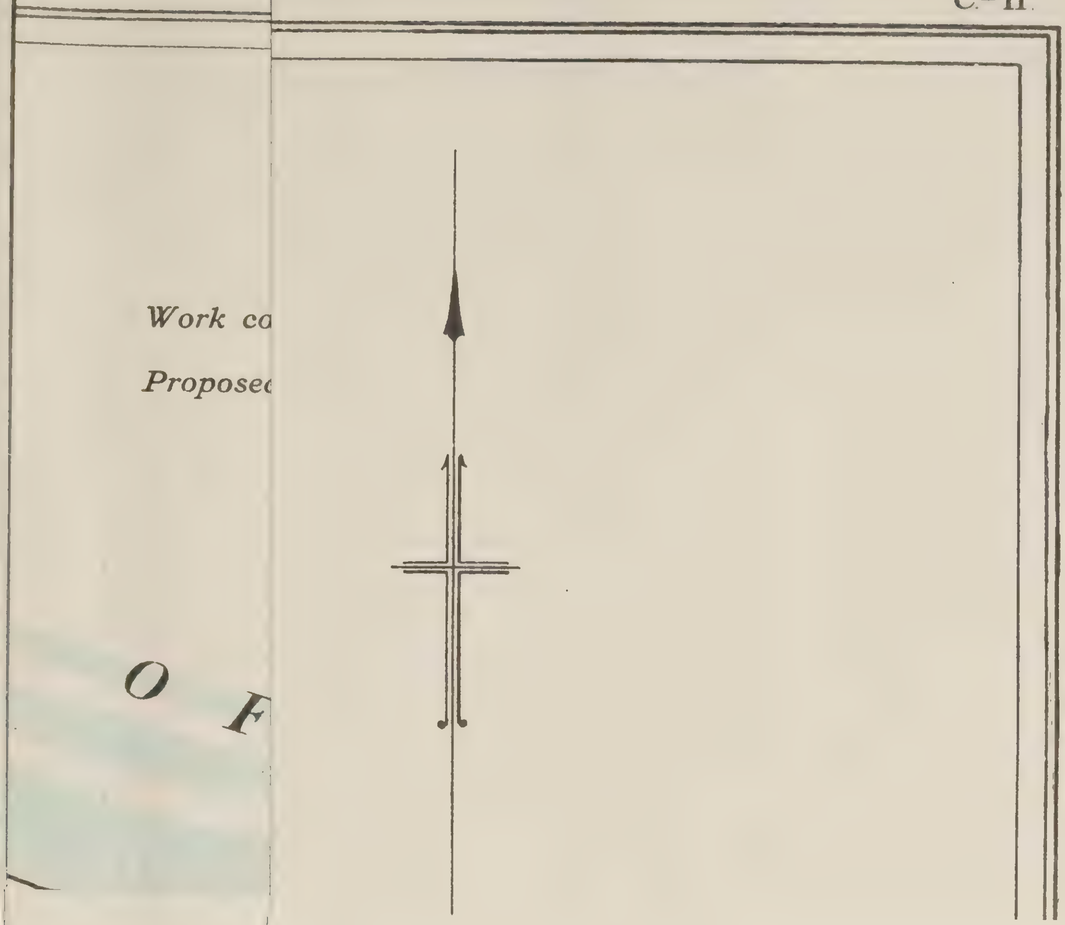
A Full Bucket.

Portion of Western Road Drain.

Portion of Western Road Drain.



Pile-driving Plant.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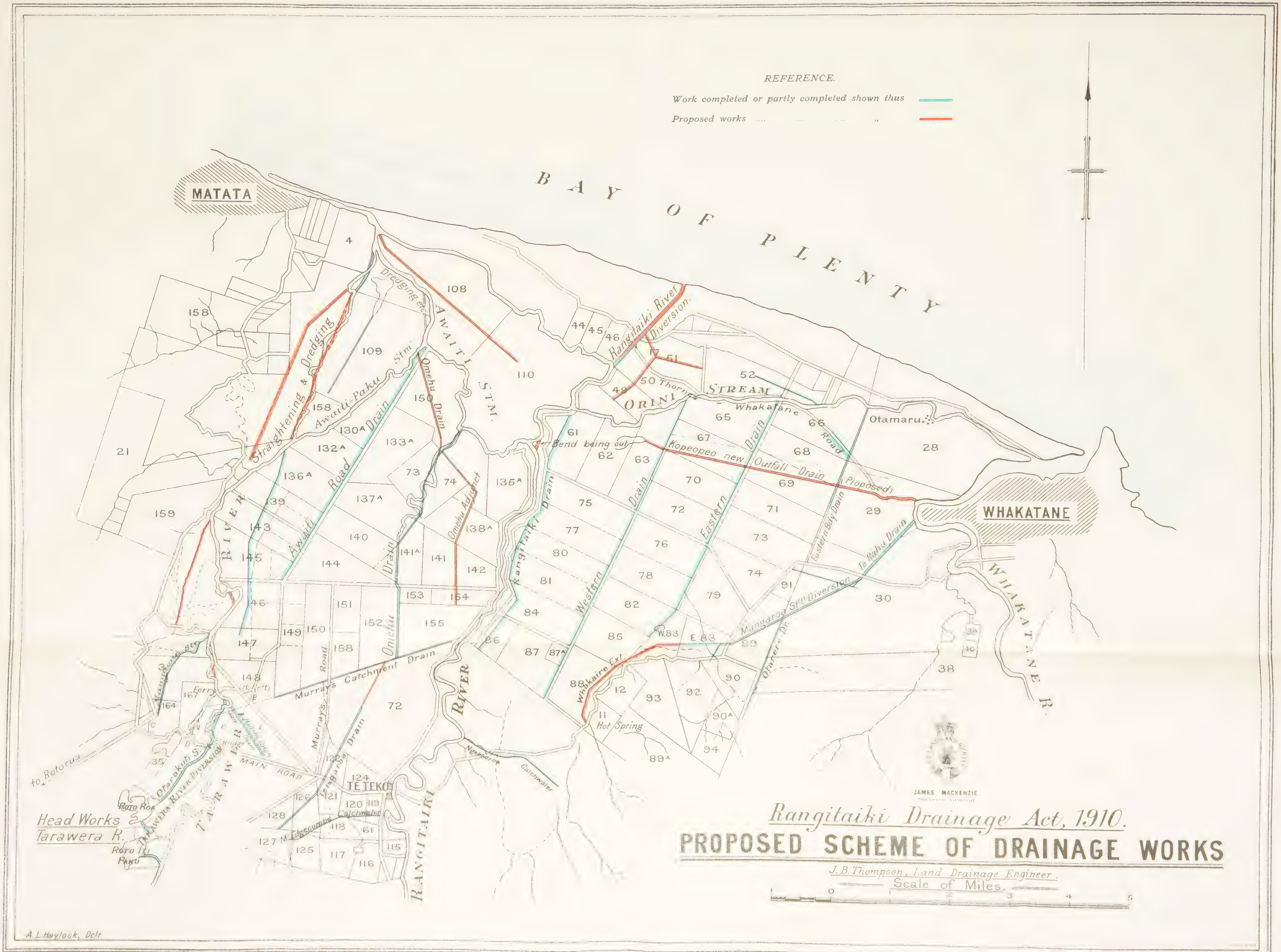

REFERENCE.

Work completed or partly completed shown thus 🟩

Proposed works .... ,, 🟥

Rangitaiki Drainage Act, 1910.

PROPOSED SCHEME OF DRAINAGE WORKS

J. B. Thompson, Land Drainage Engineer.

Scale of Miles.

1 0 1 2 3 4 5

On the upper Tarawera nothing further has been done: the river is still lowering and scouring out its own bed. These works have been most successful, the main coach-road across the swamp, previously flooded by this river, being perfectly dry throughout last winter.

Considerable attention is, of course, given to the groynes, &c., at the headworks near the lakes.

RANGITAIKI RIVER DIVERSION CONTRACT.

As mentioned previously, this contract has been abandoned. The contractors (Messrs. Rich and Jeffreys), pursued by misfortune, met with unlooked-for difficulties throughout, and finally, before bringing their suction plant into an efficient state, abandoned the work. Acting on your instructions I took charge of the contract (11th March, 1913). No time was lost in mapping out a scheme of operations and getting the works into going-order again. A Priestman grab dredge, as before mentioned, was at once taken up to the site and started on the excavation of the channel. The erection of the necessary stop-banks and the cutting-away of the sandhills are now in hand, and all works will be fully manned at an early date.

The importance of this work is fully recognized, and no effort will be spared in bringing it to a speedy and, I feel sure, successful finish. It is expected that the channel will be through within thirteen months or less.

TE RAHU – MANGAROA OUTFALL.

A preliminary cut with 10 ft. bottom and a depth of 4 ft. above the final bottom has been made throughout this outfall. This, besides carrying off a large volume of water, which previously percolated through the swamp, has considerably settled the country and rendered it excellent dredging. As mentioned before, a Priestman grab dredge is now at work on this outfall, having just started, and excellent work is being done. This excavation will take the best part of fifteen months to complete, and the dredge will then commence the cutting of the Kopeopeo outfall.

OMEHU DRAIN.

The old Omehu watercourse has been straightened, cleaned, and deepened throughout, and this work has brought about a marked improvement in the adjoining country. A large area in its upper reaches is now permanently dry, and settlers are busily engaged "breaking in" and grassing their land.

SNAGGING RANGITAIKI RIVER.

This river, from Kokohinau to Te Teko, a distance of 4 miles 10 chains, has been snagged to a width of 33 ft., and made navigable for launches and punts, thus providing a through waterway from Te Teko to Matata Harbour.

MINOR WORKS, OUTLET DRAINS, ETC.

Recognizing the delay that must necessarily occur in completing the main outfalls, it was decided to proceed as far as possible with the minor works. This departure from the systematic method of working a drainage scheme has resulted in the southern half of the swamp being practically fully drained at least two years earlier than would otherwise have been the case, whereas the northern and low-lying portion has not been noticeably affected. Consequently, now, as the main outfalls are advanced, results will come doubly quick.

These minor portions of the scheme are all well advanced and showing good results. During the year 15 miles 13 chains of new drains have been cut and 8 miles 68 chains cleared and deepened.

AWAITI BEND DIVERSION.

This work, started last season and discontinued owing to winter floods, is now well on to completion. Wheel scoops have been used with great success, and the excavation is now complete, and the willows on the river-bank at intake and outlet are now being blown out preparatory to opening the intake.

For some considerable time this channel will act as a spillway, and can if necessary be deepened by dredging later on. The total amount excavated to date is 13,720 cubic yards.

FLOATING PLANT.

This consists of two Priestman grab dredgers, one Hammond bucket dredge, one suction dredge (incomplete), one oil-launch, three pontoons, one ferry punt, and sundry small punts. All are in good order and condition.

I intend very shortly transferring one of the Hauraki Plains launches to these works, as one launch is now not able to cope with the work of towing, &c.

BARGES AND PONTOONS.

During the year two large pontoons were built in readiness to receive the Priestman dredging machinery, that built at Matata being 55 ft. by 24 ft. by 6 ft., and the one built inland at Mangaroa being 55 ft. by 22 ft. by 6 ft.

Two coal-punts and one barge for river-snagging were also built. All this work was done by our workmen.

TELEPHONE.

A private telephonic connection has been made between Matata and the Engineer's quarters at the "outlet," and is most useful.

BUILDINGS.

These consist of an office, Engineer's and men's quarters at the "outlet," men's quarters at Mangaroa, and a smithy and engineering workshop at Matata. This workshop is fitted with a 4½ h.p. standard oil-engine, lathe, drills, and general engineering workshop tools, it having been found necessary to do so owing to the inaccessibility of these works and the consequent delays, inconveniences, and expenses that occurred in effecting machinery repairs at Auckland.

ROAD-CONSTRUCTION.

Roadworks are being carried out with moneys from accrued "thirds" and Government grants only. During this year 3 miles 30 chains of new roads have been constructed and completed, 75 chains of this being double-drain formation.

FENCING.

During the next twelve months a considerable amount of fencing-in of main outfalls will have to be undertaken so as to preserve them from damage by trespassing stock, and also in justice to settlers through whose properties land has been taken for large outfalls.

SUMMARY OF WORKS PERFORMED.

During this past year the following works have been carried out: Dredged, 31,486 cubic yards; new drains, 15 miles 13 chains; drains cleaned and deepened, 8 miles 68 chains; river-snagging, 4 miles 10 chains; one sill bridge erected; five pontoons built (two for Priestman dredgers, two for coal-carrying, and one for river-snagging); one coal-hopper jetty and one landing-stage erected; clearing and stumping, 67½ chains; understrutting Te Ngaukoro Bridge; excavating dredge basin at Mangaroa; fitting out machinery-shop at Matata; erection of quarters at "outlet" and Mangaroa; excavation of Awaiti Bend diversion, 10,220 cubic yards; erection of dredges and general repairs; improvements and maintenance of existing works. Drains constructed to date total 40½ miles, and river-snagging 9¼ miles.

All the above works were performed either by piecework contract or day labour. The average daily number of men employed on the various works was ninety. Difficulty has been experienced in obtaining labour, but this condition is now improving.

PROPOSED WORKS.

The principal works to be carried out during the current financial year are as follows:—

(1.) Continuance and maintenance of works in hand, with probable completion of the Rangitaiki River diversion and the Te Rahu – Mangaroa outfalls.
(2.) Erection of bridges over outfalls.
(3.) Continuance of road-construction.

SURVEYS.

A party has been engaged throughout the year on land and engineering surveys. Series of levels have been taken throughout the swamp, and these have now been connected up and "closed," and are fairly complete.

The land surveys of the various outfalls are well up to date.

ACQUISITION OF NATIVE LANDS.

During the year 370 acres, comprising twenty-nine sections of Native land, were acquired for the more efficient carrying-out of the drainage and other works. Sundry other small areas were acquired for road purposes.

WORKS EXPENDITURE FOR THE YEAR.

On account of piecework contracts and day labour of all descriptions employed upon drainage operations, pontoon-building, erection of buildings, engineering surveys, erection of machinery, &c., the sum of £7,074 3s. 11d. was paid out of local imprest. There were no payments to contractors in connection with the Rangitaiki River diversion during the year.

In connection with road-construction, out of special grants the sum of £284 17s. 9d. was paid from local imprest.

The number of piecework contracts was twenty.

OFFICE.

The books in connection with these works are kept at the Thames office.

Many plans, including road, Proclamation, and engineering, besides tracings, were made.

The Assistant Land Drainage Engineer, Mr. O. N. Campbell, who is in charge of the works, has done his utmost to ensure the success of all operations, and my thanks are due to him for his assiduous attention to all matters. Mr. G. Tuck, foreman dredgemaster, has also laboured hard in connection with the building of pontoons and erection of machinery, most expeditious work having been done in this connection.

The accompanying plan shows works in hand and those proposed.

I have, &c.,
J. B. THOMPSON,
Land Drainage Engineer.

The Under-Secretary, Department of Lands and Survey.

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NEW ZEALAND.

REPORT

OF THE

ROYAL COMMISSION ON FORESTRY

(TOGETHER WITH MINUTES OF PROCEEDINGS AND EVIDENCE).

Presented to both Houses of the General Assembly by Command of His Excellency.

WELLINGTON.
BY AUTHORITY: JOHN MACKAY, GOVERNMENT PRINTER.
1913.

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COMMISSION.

Liverpool, Governor.

To all to whom these presents shall come, and to Henry Douglas Morpeth Haszard, Esq., F.R.G.S., Commissioner of Crown Lands and Chief Surveyor for the Westland Land District; Thomas William Adams, Esq., farmer, of Greendale, Canterbury; Samuel Isaac Clarke, Esq., builder, of Ponsonby, Auckland; Leonard Cockayne, Esq., F.R.S., F.L.S., Ph.D., of Christchurch; Frank Yates Lethbridge, Esq., farmer, Makino Road West, Feilding; and Charles Primrose Murdoch, Esq., woodware-manufacturer, of Auckland: Greeting.

Whereas it is desirable to ascertain in what manner the areas of land within the Dominion of New Zealand now under standing forest should be dealt with, and to what extent the existing afforestation operations of the Government of New Zealand are sufficient to satisfy the future demand for timber within the said Dominion, and how far such operations should be extended:

Now know ye that, in exercise of the powers conferred by the Commissions of Inquiry Act, 1908, and of all other powers and authorities enabling me in this behalf, I, Arthur William de Brito Savile, Earl of Liverpool, Governor of the Dominion of New Zealand, acting by and with the advice and consent of the Executive Council thereof, do hereby appoint you, the said

Henry Douglas Morpeth Haszard,
Thomas William Adams,
Samuel Isaac Clarke,
Leonard Cockayne,
Frank Yates Lethbridge, and
Charles Primrose Murdoch

to be a Commission for the purpose of inquiring by all lawful means into the condition of forestry in New Zealand, and for that purpose to inspect the forest lands of the said Dominion and the State nurseries and plantations, and to report—

(1.) Which of the existing forest lands it is desirable to permanently retain under forest covering for the purposes of soil-protection and prevention of denudation, water-conservation, prevention of floods, climatic, scenic, or any other national benefit.

(2.) Which of the forest-areas are not required for any of the purposes mentioned in (1), but are suitable for settlement, sawmilling, or other commercial purposes, indicating whether such areas should be utilized forthwith or rendered available at some future period.

(3.) The best method of dealing with the indigenous forests in the public interests generally.

(4.) Whether or not, in view of the large and increasing demand for white-pine timber in connection with the butter industry, the exportation thereof should be wholly or partially prohibited.

And with regard to afforestation operations—

(5.) The probable future demand for timber for commercial purposes within the Dominion of New Zealand.

(6.) The nature and kinds of timber likely to be so required.

(7.) How far the operations of existing State nurseries and plantations meet the probable demand.

(8.) To what extent such operations should be supplemented and expanded and in what localities should new nurseries and plantations (if any) be situated.

(9.) Whether the present operations of the State are being conducted on satisfactory and progressive lines. If not, to what extent and in what manner the present management and control should be altered.

(10.) Under what conditions should the State encourage and assist tree-planting by private individuals and local bodies; and, generally, any matters which, in your opinion, affect forest conditions and afforestation in the Dominion, or would tend to promote their development, including the necessity or expediency of any legislation in the premises.

For the purposes of your inquiry you are hereby authorized and empowered to have before you and examine all books, papers, documents, or writings you deem necessary, and examine on oath or otherwise, as allowed by law, all witnesses or other persons whom you think capable of affording you any information in the premises. The said Henry Douglas Morpeth Haszard shall be your Chairman, and you are hereby empowered and directed to conduct your inquiry in such manner, at such times, and with such adjournments as you think fit. And, using all diligence, you are hereby required to report to me under your hands the result of your inquiry, with any recommendations you think fit to make in the premises, on or before the thirtieth day of April, one thousand nine hundred and thirteen.

Given under the hand of His Excellency the Right Honourable Arthur William de Brito Savile, Earl of Liverpool, Governor and Commander-in-Chief in and over His Majesty's Dominion of New Zealand and its Dependencies; and issued under the seal of the said Dominion, at the Government House, at Wellington, this eleventh day of February, in the year of our Lord one thousand nine hundred and thirteen.

W. F. Massey,
Minister of Lands.

Approved in Executive Council.
J. F. Andrews,
Clerk of Executive Council.

EXTENDING TIME OF COMMISSION.

Liverpool, Governor.

To all to whom these presents shall come, and to Henry Douglas Morpeth Haszard, Esq., F.R.G.S., Commissioner of Crown Lands and Chief Surveyor for the Westland Land District; Thomas William Adams, Esq., farmer, of Greendale, Canterbury; Samuel Isaac Clarke, Esq., builder, of Ponsonby, Auckland; Leonard Cockayne, Esq., F.R.S., F.L.S., Ph.D., of Christchurch; Frank Yates Lethbridge, Esq., farmer, Makino Road West, Feilding; and Charles Primrose Murdoch, Esq., woodware-manufacturer, of Auckland: Greeting.

Whereas by a Warrant dated the eleventh day of February, one thousand nine hundred and thirteen, and issued under my hand and the public seal of the Dominion, you were appointed a Commission to inquire into and report on the condition of forestry in New Zealand, and you were directed and required to report to me on or before the thirtieth day of April then next ensuing your proceedings and your opinion touching the matters mentioned therein:

And whereas it is expedient that the said period should be extended as hereinafter provided:

Now, therefore, I, Arthur William de Brito Savile, Earl of Liverpool, the Governor of the Dominion of New Zealand, in exercise of the powers conferred by the Commissions of Inquiry Act, 1908, and of all other powers and authorities enabling me in that behalf, and acting by and with the advice and consent of the Executive Council of the said Dominion, do hereby declare and appoint that the time at or before which you shall present to me your report aforesaid is hereby extended to the thirty-first day of May, one thousand nine hundred and thirteen :

And with the like advice and consent, and further pursuance of the said power and authority, I do hereby confirm the said Commission, except as herein varied.

Given under the hand of His Excellency the Right Honourable Arthur William de Brito Savile, Earl of Liverpool, Governor and Commander-in-Chief in and over His Majesty's Dominion of New Zealand and its Dependencies; and issued under the Seal of the said Dominion, at the Government House, at Auckland, this twenty-ninth day of April, in the year of our Lord one thousand nine hundred and thirteen.

H. D. BELL,
For Minister of Lands.

Approved in Executive Council.
J. F. ANDREWS,
Clerk of Executive Council.

REPORT.

To His Excellency the Right Honourable Arthur De Brito Savile, Earl of Liverpool, Governor and Commander-in-Chief in and over His Majesty's Dominion of New Zealand and its Dependencies.

May it please Your Excellency,—

We, the Commissioners appointed by Your Excellency on the 11th day of February, 1913, to inquire by all lawful means into the condition of forestry in New Zealand, and for that purpose to inspect the forest lands of the Dominion and the State nurseries and plantations, and to report on the several matters referred to in the Commission, a copy of which is attached hereto, have the honour to report as follows:—

We assembled at Wellington on the 26th February and held three meetings, at which our itinerary was arranged, and various matters discussed. The Hon. W. F. Massey, Prime Minister of the Dominion, was present at the opening of the first meeting, and briefly addresed us on the objects of the Commission. The Chairman, Mr. Haszard, also delivered a short opening address.

Leaving Wellington on the evening of the 28th February, the Commission reached Invercargill on the 1st March, and held a public sitting there in the Government Buildings on the 3rd March. Since the subjects of our inquiry were of great public interest we decided to admit the public and the Press to all our sittings, excepting such as were held in committee, and to advertise beforehand the dates and place of such in the local newspapers. Whilst in Southland your Commission visited the Longwood Forest, the Waiau Forest, and the Waikawa Forest, viewing at the same time a considerable portion of the Southland Plain. A visit was also paid to the Bluff, and an inspection made of the Government timber-preserving works at Kew, where we examined various samples of timber treated by the Powellizing process. On the 6th March your Commission proceeded to Tapanui, making an inspection of the Government nursery the same day under the guidance of Mr. R. G. Robinson, Superintending Nurseryman for the South Island. The next day was spent, in company with Mr. Robinson, in examining the Dusky Hill plantations, and in paying a brief visit to the silver-beech forest in Whisky Gully, Blue Mountains. Leaving Tapanui on the 8th March we reached Dunedin the same evening. A public sitting was held in that city at the Land Office on the 11th March. While in Dunedin and neighbourhood your Commission visited Waitati, where, in the grounds of the Mental Hospital, under the guidance of Dr. Ross, the Superintendent, we examined a remarkable self-sown growth of an Australian gum (*Eucalyptus numerosa*). A visit was also made, in company with Mr. D. Tannock, to the plantations that are being planted in the Leith Valley by the Dunedin Corporation. In view of the use of timber for paper pulp, the paper-mill at Woodhaugh was also visited. On the 12th March your Commission journeyed to Ranfurly, on the Maniototo Plain, Central Otago, accompanied by Mr. R. G. Robinson, and inspected the nursery and the several plantations in that neighbourhood. Naseby was also visited, and the trees growing in that relatively cold climate noted. The next day we proceeded to Cromwell by rail, and had an opportunity of seeing some of the depleted area of Central Otago. On the 14th March, in order to further study the conditions for afforestation in the dry treeless districts of Central Otago and the Mackenzie Plains, your Commission proceeded to Lake Pukaki, *via* the Lindis Pass and Otarama. The following day we proceeded to Timaru by way of Lake Tekapo and Fairlie, examining *en route* certain plantations of the Mackenzie County Council. At Timaru your Commission divided into subcommittees, Messrs. Clarke and

Murdoch remaining in that city, and the other members proceeding to Christchurch, which was reached the same evening. On Monday, the 17th March, the Christchurch subcommittee visited a number of old plantations on the Canterbury Plains, including that of Mr. John Deans, at Homebush, where there is a vigorous growth of larch. The next day a public sitting was held in Christchurch at which all the members of your Commission were present. On the 19th March we travelled to Hanmer, and under the guidance of Mr. R. G. Robinson, Superintending Nurseryman for the South Island, visited the State nursery and a portion of the plantations. The next morning other parts of the plantations were visited and the prison camp inspected, and, in the evening, Christchurch was reached. On the 21st March the extensive plantations at Greendale of Mr. T. W. Adams, one of your Commissioners, were visited, and while there a deputation was received of settlers from Oxford regarding the reservation of a certain forest-area in that locality. On the 22nd March your Commission travelled to Hokitika, Westland, going through a portion of the Waimakariri National Park and the Otira Gorge. While in Westland we examined various types of forest, including the beautiful scenic reserve and other forest lands at Lake Kanieri. We also visited the sawmill of Messrs. Butler Bros., under the guidance of Mr. J. Marchant, and that of Messrs. Baxter Bros. The Town of Ross was the furthest point south that we reached in Westland. On the 25th March we held a public sitting at the Courthouse, Greymouth, examined various exotic trees growing in the town, and had the opportunity of seeing, at the factory of Mr. Charles Uddstrom, furniture in process of manufacture from one of the New Zealand beeches, probably silver-beech (*Fagus Menziesii*). Whether this determination be correct or the contrary, the above is the species milled in Southland, the principal locality where this timber is milled. The above timber appeared to your Commissioners to be well suited for furniture, and, as there is a very large supply, its export in quantity would be of great value to the Dominion. The evening of the same day we proceeded to Reefton, which town we left early the next morning *en route* for Nelson, *via* the Valley of the Buller. On the 27th March your Commission held a public sitting at the Council Chambers, Nelson, and the next day proceeded *via* the Rai Valley and Blenheim to Dumgree, returning to Blenheim the same evening. At Dumgree we saw the Government plantation, part of which was recently destroyed by fire. On the morning of the 29th March a public sitting was held in the Land Office, Blenheim, and in the afternoon part of your Commission visited an old plantation on the Hillersden Estate, Wairau, in the neighbourhood of Blenheim, and the remainder inspected the scenic reserve at Double Bay, Queen Charlotte Sound. The same evening your Commission left Picton for Wellington, where we arrived about 10 p.m. Three days, including Sunday, were spent in Wellington, during which time your Commission discussed various matters, and decided on the itinerary for the North Island. On the 2nd April your Commission journeyed to Napier. A public sitting was held in the Lands Office on the morning of the 3rd April, and in the afternoon one part of your Commission visited a proposed scenic reserve at Titiokura, and the remainder were most kindly shown over a portion of the district by the Hawke's Bay Builders' Association. On the 4th April your Commission divided into two subcommittees, Messrs. Haszard (Chairman) and Murdoch and Dr. Cockayne journeying to Lake Waikaremoana, *via* Wairoa, in order to inspect the forests near the lake; and Messrs. Adams, Clarke, and Lethbridge travelled to Waiotapu, *via* Tarawera and Taupo. The Waikaremoana party returned to Napier on the 5th April, and leaving that city on the 6th joined the other members of your Commission at Waiotapu the same evening. From Waiotapu the Government plantations were inspected under the guidance of Mr. H. A. Goudie, the Superintending Nurseryman for the North Island, and the prison camp of the Kaingaroa Plains was also visited. On the 8th April your Commission, under the same guidance, inspected the nursery at Whakarewarewa and certain of the plantations in its vicinity. On the 9th April your Commission again divided, Messrs. Clarke, Lethbridge, and Murdoch proceeding to Tauranga, *via* Oropi, and the next day to Hamilton, *via* Waihi; while Messrs. Haszard (Chairman), Adams, and Dr. Cockayne went to Thames, where, in company with Mr. J. W. Hall, they inspected an interesting mixed plantation of exotic and indigenous trees planted by that gentleman forty years ago. This plantation is of special interest since an account of the rate of growth of the trees has been published in the "Transactions of the New Zealand Institute," Vol. 34, p. 386. The members of the two subcommittees of your Commission, with the exception of Dr. Cockayne, who had proceeded to Auckland by boat from Thames, reunited at Hamilton, and on the morning of the 10th April visited the Government experimental farm at Ruakura, and also an important plantation of Australian gums on the estate of Mr. R. Gillet, Kirikiriroa. The same evening the whole of your Commission reached Auckland. On the 12th April your Commission sat in committee at the Lands Office, Auckland. On the 14th April we journeyed to Dargaville, where on the day following a public sitting was held in the Courthouse. Mr. Adams and Dr. Cockayne did not attend the above sitting, since they went as a subcommittee on the same day to visit a proposed scenic reserve at Ruawai, near Naumai. On the 16th April your Commission divided into two subcommittees, Messrs. Haszard (Chairman), Clarke, Lethbridge, and Murdoch setting out for the Waipoua State Forest, and Mr. Adams and Dr. Cockayne journeying to Kawakawa, *via* Tangiteroria and Whangarei. The Waipoua party made an inspection of the forest the next day under the guidance of Mr. J. Maxwell, the caretaker, reaching Kohukohu, Hokianga, the same evening, to which township the remainder of your Commission journeyed the same day, *via* Ohaeawai. On the 18th April Messrs. Haszard (Chairman) and Lethbridge inspected the Omahuta Forest Reserve, and Messrs. Clarke and Murdoch that on Mount Raetea, to the north of Broadwood. On the 19th April your Commission travelled to Whangarei, *via* Ohaeawai and Kawakawa. On the 21st instant the Puhipuhi Forest Reserve was inspected by Messrs. Haszard (Chairman), Adams, Clarke, and Murdoch, in order to ascertain the results of the fire in the State plantations, and the value of the reserve for afforestation or settlement, as the case may be. On the 22nd April your Commission returned to Auckland. A sitting in committee was held in the Lands Office, Auckland, on the morning of the 23rd, and in the afternoon Messrs. Adams and Lethbridge and Dr. Cockayne visited the Three Kings' College, where they were shown by the Principal, the Rev. J. H. Simmonds, his important collection of Australian gums. The following day a public sitting was held in the Lands Office, Auckland, at which all the members of your Commission were present. On the 25th April your Commission left Auckland at noon, an inspection having been made in the course of the morning of the experimental butter-boxes referred to further on in our report. At Te Kuiti your Commission divided, Messrs. Haszard (Chairman) and Lethbridge, accompanied by the Secretary, Mr. E. Phillips Turner, proceeding to the Mokau River, in order to inspect the present and proposed scenic and climatic reserves, while the remaining members went on to Taumarunui. On the following day the Taumarunui party, under the guidance of Mr. H. Lundius, Crown Lands Ranger, proceeded down the Wanganui River, and paid careful attention to the scenic reserves and the banks of the river in general. On the 25th April the same party continued their journey down the Wanganui River, reaching New Plymouth the same evening. *En route* they called at Wanganui, and had an interview with the Chairman of the Wanganui River Trust, Mr. T. D. Cummins, and Mr. W. A. Veitch, M.P. The Mokau subcommittee, having made an examination of the banks of that river as far as the coal-mine, Parewaro, joined the rest of your Commission at New Plymouth on the 25th April, and that day was occupied in a visit to the forest reserve on the Manganui River, near Inglewood, and to the Mount Egmont National Park. On the 30th April a public sitting was held at New Plymouth in the Municipal Council Chambers. On the 1st May your Commission left New Plymouth for Wellington, reaching that city the same evening.

As it was found impossible, owing to the extent of the country to be traversed, and also on account of numerous reserves that your Commission were requested to inspect, not included in our itinerary, we were reluctantly compelled to ask for an extension of time within which to present our report. This was sanctioned, and the period of your Commission was extended to the 31st May, inclusive.

On the 3rd May your Commission divided into three parts: Mr. Haszard (Chairman), Dr. Cockayne, and Mr. E. Phillips Turner (Secretary) remaining in Wellington, in order to draw up a provisional draft of the report. Messrs. Clarke, Lethbridge, and Murdoch proceeded to Auckland, and from that centre visited the kauri-gum reserves at Waitakerei and Swanson, and took informal evidence from residents in the district. On the 9th May the same subcommittee inspected the very interesting gum plantations of Mr. R. Reynolds, referred to in Appendix C. On the 9th May Mr. Haszard (Chairman) proceeded to Taumarunui in order to join the Auckland party, and with them examine certain forest lands and sawmills in the vicinity of the Main Trunk line. On the 10th instant the above subcommittee visited the sawmill at Mananui of Messrs. Ellis and Burnand, under the guidance of Mr. J. W. Ellis. An automatic dovetail-jointing machine was seen in operation. This constructs wide boards suitable for making butter-boxes out of narrow pieces of white-pine. This renders possible the utilization of what has hitherto been a waste product, and, should the machine come into general use, a considerable saving in the conversion of white-pine will be effected. Samples of the jointed wood were secured as an exhibit for your Commissioners. On the 12th May the subcommittee inspected in the morning the Government sawmill at Kakahi, as also the adjoining forest, and in the afternoon visited the forest at Owhango, reaching Ohakune the same evening. On the 12th May the subcommittee proceeded to Marton, where the next morning various plantations were visited, and in the afternoon the train was taken to Wellington. On the 3rd May Mr. T. W. Adams, who had been detailed to report on various matters in the South Island, and to visit the Government plantations at Conical Hills, which bad weather had prevented your Commission inspecting when at Tapanui, proceeded to Christchurch. On the 6th May Mr. Adams made inquiries regarding the conversion of *Pinus radiata* (generally known as *Pinus insignis*) in Canterbury. On the 7th May Mr. Adams proceeded from Greendale to Christchurch, and took photographs and measurements of poplars growing upon the banks of the River Avon. The next day Invercargill was reached, and on the 9th instant Mr. Adams proceeded to Queenstown, and on the following day inspected the plantations in the vicinity, and visited a certain Government reserve in order to ascertain its suitability for tree-planting. On the 12th May Mr. Adams proceeded to Tapanui, and the next day, in company with Mr. R. G. Robinson, Superintending Nurseryman for the South Island, inspected the Conical Hills plantation, and reached Waiwera the same evening. The next day Mr. Adams, under the guidance of Mr. J. Christie, inspected some gum plantations near Warepa, and in the afternoon proceeded to Dunedin. The next day Mr. Adams superintended the photographing of the natural plantation of gums at Waitati. On the 16th instant Mr. Adams proceeded to Greendale, *via* Norwood, and next day he procured photographs of houses built entirely of *Pinus radiata.* On the 19th May Mr. Adams proceeded to Wellington to join the other members of your Commission.

On the 20th instant your Commission assembled at the Parliamentary Buildings, Wellington, to draft their report. On the 22nd May your Commission divided into two subcommittees, one, consisting of Messrs. Haszard (Chairman) and Adams and Dr. Cockayne, remaining in Wellington in order to prepare a draft of the report; and the other, consisting of Messrs. Clarke, Lethbridge, and Murdoch, visited the forest reserve near Woodville, and reached Feilding the same evening, inspecting *en route* the Mangoira, the Mangawhararariki, and Rewa Forest Reserves. On the 24th May, in company with Mr. K. Dalrymple, the same subcommittee visited McKelvie's run on the dunes south of the Rangitikei River, and Dalrymple's run on the north of the Rangitikei. On the 26th May Wanganui was visited in the morning, and Messrs. Veitch, M.P., Cummins, Macfarlane, and others on the River Trust, together with a deputation from the Scenery Preservation and Beautifying Society of Wanganui, made representations to the subcommittee regarding the conservation of the headwaters of the Wanganui. The subcommittee reached Wellington on the evening of the 26th. Since that date the full Commission has been engaged in the consideration of the final report.

The total distance travelled by your Commission was seven thousand miles.

As seen from the order of reference, the ten questions therein fall into two distinct categories, the one dealing with the existing natural forests of the Dominion, and the other with afforestation. It might be thought that these two phases of forestry should not be separated, and such would be the case in many other countries, but in New Zealand, as we explain at some length further on in this report, the natural forests belong, with perhaps one exception, to a class which cannot regenerate sufficiently quickly to allow them to be kept as permanent forests yielding a succession of crops.

Though each of the questions we are asked to answer is obviously of high importance, two matters stand out prominently — namely, that of climatic reserves and that of afforestation—since both concern not only the present but also the future prosperity of the Dominion. With regard to afforestation, the financial aspect is one of great moment, and in order to assure financial success the greatest economy must be practised, since the expenditure of an additional £1 per acre yearly would mean, at 4 per cent. compound interest no less a sum at the end of fifty years than £152.

At first thought it might seem that the ground covered by your Commission in so brief a period as some ten weeks had been altogether too extensive, and that the forests and plantations visited could have received but a cursory examination at best. This might well have been the case but for the fact that various members of your Commission had been over much of the route previously, and in a more leisurely manner. Further, the members of your Commission generally have, in a private capacity, examined many other parts of the forest lands of the Dominion impossible to have been visited by your Commission in the allotted time, and that, moreover, they have had for many years a first-hand acquaintance with New Zealand forests in general, and with various private plantations. The above statement is illustrated by the appended map, which shows not only the route taken by your Commission, but also those parts visited previously by the members.

From the earliest days of settlement up to the present time there has been a great deal of tree-planting by private landowners and public bodies, whose activity in this direction is abundantly manifest throughout most of the settled parts of the Dominion. These plantations, indeed, are much greater than is generally supposed, since they total no less than 44,910 acres.*

Such plantations, great and small, are not only of importance for their commercial or climatic value, but they afford the most valuable testimony as to the trees suitable for afforestation, or other purposes, in different parts of the country. Also, they supply undeniable evidence as to the relation of the different species to the soil and the climate; the rate of growth of such species; the quality of their timber under different conditions and different ages; the results of planting at different distances; the effect of thinning; their liability to disease; and in many other matters of the highest importance with regard to forestry operations in the future. Regarding these private plantations very little has been published, notwithstanding they have so much of import to tell. The owner frequently is ignorant as to the names of his trees, and it is not infrequent that they have been supplied to him under wrong names. Quite early in our quest for information we recognized how important a full knowledge of the plantations of the Dominion as a whole would be; so, in order to make a commencement of a much-desired work, we invited, through the Press and otherwise, owners of plantations to send information as to the names of their trees, their height and girth at 5 ft. from the ground, the nature of the soil in which they grew, and the altitude and climate of the locality.

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* "New Zealand Official Year-book," 1912, p. 600, but deducting the 18,870 acres of State plantations.

We also visited certain of the plantations that lay along our route, and made special excursions to such in a few localities, but it is plain that much still remains to be done in this important field of research, and that an exhaustive knowledge of the plantations of New Zealand throughout is a matter of the highest importance to the State. What information we have collected on the above matters is shown in Appendix D.

We have held altogether twelve public sittings, at which we examined eighty-eight witnesses. In addition, we have had many informal conversations with settlers and others interested in one phase or another of the subjects under our consideration, and we have thereby elicited a considerable amount of valuable and suggestive information. One and all have been anxious to give us all the information and assistance that lay in their power; indeed, no trouble has seemed too great, and we have had reluctantly, owing to lack of time, to decline many invitations to visit plantations or pieces of natural forest. We have received many letters and contributions from different sources. For the whole of these we are most grateful, and we beg to accord our hearty thanks. We have also to thank sincerely several gentlemen who have placed their time, services, and knowledge at our disposal. We are expressly indebted to the Rev. Mr. Simmonds, of the Three Kings' College, Auckland, who has written the masterly letter on *Eucalypti* which appears in Appendix C; and Mr. R. Reynolds, of Trecarne, Waikato, who has given us such important evidence as to the remarkable durability of some of his *Eucalypti*, and sent us samples of the wood. It is hardly going too far to state that Mr. Reynolds's Australian gum may prove eventually almost the most important tree introduced into New Zealand. The evidence we have taken is appended. While carefully considering the facts therein recorded, and as far as we know neglecting nothing of importance brought before us, our conclusions are by no means based on such evidence alone. On the contrary, we have been guided in no small measure by our personal experience and observations.

In the compilation of our report we have sought to be as brief as possible, without neglecting any points of importance in an order of reference so extensive.

We have made every effort to carry out the important duties intrusted to us. The limited period allotted to us to undertake a task so great had led to our having had to travel early and late, and at the greatest speed. Nor would this have sufficed had it not been that we were favoured by almost invariably fine weather. Even as it was certain localities would have remained unvisited had we not divided at times into subcommittees, so that several forest-areas far apart could be inspected on the same day.

It is our pleasing duty to record that in all our recommendations there has been complete unanimity.

Passing now to the various questions on which we were instructed to inquire, and which fall naturally under the two leading heads of matters concerning the indigenous forests and those concerning afforestation, we beg to report as follows:—

PART I.—THE INDIGENOUS FORESTS.

1. As to the Existing Forest Lands, and which it is desirable to permanently Retain under Forest Covering for the Purposes of Soil-protection and Prevention of Denudation, Water-conservation, Prevention of Floods, Climatic, Scenic, or other National Benefit.

The above question falls naturally into two sections—the one dealing with climatic and the other with scenic reserves. Since we have found it impossible to visit all the forest lands of the Dominion, or even to afford in certain cases adequate time for a thorough inspection of the areas visited, a good deal of reliance has had to be placed upon departmental reports, the evidence of departmental officers or others, together with the knowledge previously obtained by various members of your Commission. Hence it follows that a general answer, so far as concerns climatic reserves, is alone possible, and that the areas suggested in Appendix A as suitable for such reserves must, in many instances, have their exact delimitations defined by the Department of Lands under the conditions laid down in our report.

(1.) *Climatic Reserves.*

For the purposes of this report, we define a "climatic reserve" in the terms of the question as one for the purposes of protection of soil, prevention of denudation, water-conservation, prevention of floods, and, in addition, shelter from winds. This latter function, not mentioned in the order of reference, is one of great moment in windswept localities, no matter the altitude, and obviously many scenic reserves have a strong climatic effect in this regard, and for that reason alone should be zealously preserved.

The value of having a forest covering of the watershed of rivers and at the sources of such and the smaller streams is now so well recognized that only a few extracts from the writings of leading authorities are needed here.

Professor I. Bowman writes dealing with the question of the evil effects of deforestation in the Southern Appalachian Mountains: "The rain beats directly upon the soil, the retarding influence of the ground litter and tree-root is withdrawn, and more rapid soil-removal occurs. When one of these evil effects have been allowed to take place mankind is deprived practically for thousands and even millions of years of the favourable conditions that preceded the epoch of destruction. In a hundred years man may achieve such baneful results as nature will compensate only during a geologic period of hundreds of thousands of years. Soil is a resource of priceless value. On resistant rocks its formation is exceedingly slow. Seventy thousand years is a very short time for the development of a soil-cover; for man it means a period so great that his mind can hardly appreciate it. The earth, as we find it to-day, must be treated with care if the human race is to have a fair distribution of its wealth in time. To the geologic mind there is something shocking in the thought that a single lumber merchant may in fifty years deprive the human race of soil that required ten thousand years to form."*

Professor Eug. Warming, of Copenhagen, writes as follows: "Every kind of covering formed by vegetation acts upon the physical relations in soil, and the denser, taller, and longer-lived the vegetation is, the more powerful is its action. Forest therefore acts most powerfully."†

Dr. B. E. Fernow states: "The conditions at the headwaters of each affluent must ultimately be reflected in the flow of the main river. The temporary retention of large amounts of water and eventual change into subterranean drainage which the well-kept forest-floor produces, the consequent lengthening of the time of flow, and especially the prevention of accumulation and carrying of soil and detritus which are deposited in the river and change its bed, would at least tend to alleviate the dangers from abnormal floods and reduce the number and height of regular floods." And again: "The well-kept forest-floor, better than even the close sod of a meadow, prevents erosion and abrasion of the soil and the washing of soil and detritus into brooks and rivers. . . . The best soil of the farms is often washed into rivers.‡

In relation to its area, few countries in the world are in more need of an adequate forest covering on their high lands than is New Zealand. The lofty mountain-ranges which traverse both Islands and the excessively broken nature of the land in many places, together with an average high rainfall, lead to the presence of innumerable streams, and offer ideal conditions for denudation.

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* "Physiography of the United States, and Principles of Soil in Relation to Forestry," 1911.

† "Oecology of Plants," 1909, p. 75.

‡ "Economics of Forestry," 1902, pp. 445, 446. See also appendix for article on "Erosion of Slopes in New Zealand," by C. A. Cotton, Lecturer in Geology, Victoria College.

In other words, the mountains and hills of New Zealand would, if not forest-clad, be a constant source of danger to the farm lands on which the prosperity of the Dominion so greatly depends.

From the above it follows that, in order to be efficacious, the climatic reserves of New Zealand must occupy a wide area. Originally, except where conditions of soil or climate were antagonistic, a tree-covering occupied the whole land, and extended to a height of between 3,000 ft. to 4,500 ft., more or less, according to latitude. This extensive forest has now been enormously reduced, and, indeed, rightly, in order to meet wants of settlement; nevertheless, there has been much unnecessary destruction, which has extended to the steep slopes of hill and mountain, and even to the upper altitudinal limits of the forest. Thus the headwaters of many streams are no longer surrounded by forest, and the general watersheds of the larger rivers are by no means so efficiently protected as was originally the case. The time has come, in our opinion, when these mountain forests, which in nearly every instance occupy comparatively worthless ground, and contain little, if any, milling-timber, should be zealously protected, nor, except under the most pressing of circumstances, should they be interfered with. Various Commissioners of Crown Lands, as seen in the evidence, are strongly and wisely in favour of materially extending the climatic reserves of their districts.

In Appendix A there is a list of such of the forest-areas that we specifically recommend for climatic reserves as are approximately defined. The following we also desire to be made climatic reserves, but the exact areas must be fixed by the Department of Lands:—

1. The sources of the principal rivers of Canterbury which rise in the Southern Alps. We call special attention to the Waimakariri National Park. The forest of this area has been gazetted forest reserve. This reservation we strongly recommend to be lifted, and the park made climatic reserve under the Act, as proposed in Part II.

2. The upper portion of the whole of the North Island dividing range, the exact limits to be fixed by the Department of Lands. The following principles have guided our choice in recommending the above areas: (1.) All forests situated above a certain altitude, which of necessity decreases considerably in proceeding from north to south, should be constituted climatic reserves. For example, a climatic reserve of this class on Mount Ruapehu might have its lowest limit at an altitude of 3,000 ft., while one on the Longwood Range, Southland, might descend to 1,000 ft., or even lower. (2.) Steep slopes on the lower hills, which cannot be effectively grassed, together with the sources of streams, should have their forest covering left intact. (3.) Forest on the banks of creeks, and on river-terraces, although at quite a low altitude, may be in some cases of considerable climatic importance, since, under certain circumstances, removal of forest from the banks means rapid undermining of these by the river.

At the present time the existing and proposed climatic reserves are, in many places, the haunts of numerous deer, wild cattle, or goats. We will leave the two latter classes of animals out of consideration for the present, since no one could claim that their presence within the forests was beneficial, and consider the deer alone. Should it be a fact that the presence of deer in great numbers is detrimental to the undergrowth of the forest, then it is clear that steps should be taken to either do away with them altogether or to restrict them to defined areas where they can do the minimum amount of damage. In order to ascertain what part the deer played in the economy of the upland forests, on the one hand, and what value they were to the community from the sporting aspect, on the other hand, we examined such witnesses in every centre as seemed likely to afford information of moment. Especially did we seek to get a clear expression of opinion from the side of the sportsman, and, with this end in view, took evidence from the chairman and secretary of various acclimatization societies; and, taking that evidence alone, we fail to see that deer are not harmful in a forest, or that the monetary gain to the country can in any way counterbalance the damage they must eventually do to the climatic reserves.

Taking the evidence of the non-sportsman, and considering the damage done by deer not only to the forests (see photo No. 1), but also to the plantations, orchards, and crops, our opinion as to their harmfulness is much strengthened. We therefore advise that measures be taken to restrict deer to limited areas, sufficient for sport, which may be proclaimed deer parks, where they can do the smallest possible damage.

The undergrowth of forest is of especial importance in preventing evaporation from the ground-surface, and thus assisting in conserving the water-supply. This function is recognized the world over, but in a New Zealand forest, where the undergrowth is usually very dense, its climatic effect reaches a maximum. Any factor, therefore, should be vigorously repressed which may lead to damage to such undergrowth. Deer, both red and fallow; cattle, tame or wild; and goats are of especial moment in this regard. So far as deer are concerned, these animals year by year are extending their range, so that the time is not far distant when, unless stringent measures are adopted, the whole of the Southern Alps in the South Island and the dividing range in the North Island will be overrun.

(2.) *Scenic Reserves.*

Under the term "scenic reserves" are included several distinct classes of reserve, which may be distinguished as follows:—

1. Reserves for preserving the scenery. The special character of the scenery of any country does not depend upon the surface features of the landscape, but upon the plant covering. For example, were the vegetation of the Otira Gorge to consist of European deciduous forest, and not of a mixed assembly of evergreen trees, shrubs, and ferns, most of them peculiar to New Zealand, the scenery, now famed throughout the world, would be altogether different, and its special charm and interest gone. So, too, the present Otira scenery differs in part from that of the Buller Gorge owing to the absence of New Zealand beech in the former and its predominance in the latter. The scenery of the Wanganui River has in many places between Wanganui and Pipiriki lost altogether its peculiar character and especial attraction since, instead of the original unique plant covering, innumerable European willows, in long lines, fringe its banks. The class of scenic reserve here dealt with is of especial moment along tourist routes, and the importance of maintaining the vegetation of such in its virgin condition should need no elaboration. Speaking of the vegetation of New Zealand as a whole, it must be remembered that out of its total of some 1,700 species of trees, shrubs, herbs, ferns and fern allies, more than three-fourths are found nowhere else in the world. Moreover, this vegetation, where unmolested by human occupation, is not artificial, as is that of Europe generally, where the forests have been planted or much modified by man, and even the mountain meadows changed by the grazing of domestic animals. The vegetation of New Zealand, where undisturbed, is truly primitive. It is indeed a piece of the primeval world just as planted by nature.
2. Reserves for the protection of historic places.
3. Reserves in the vicinity of hot springs.
4. Reserves for preserving examples of the vegetation, together with its accompanying birds and other animals.

Many of the foregoing reserves, as also those for climatic purposes, belong, in addition, to this class. They are, in fact, open-air museums where the unique plants and animals of New Zealand may remain unmolested for the benefit of future generations. Such otherwise would know only of the natural productions of their country from isolated specimens in gardens, dried plants in museums, descriptions in books, paintings, or photographs. Reserves of this character have been aptly termed "monuments of nature," and such have been created of late years in all parts of the civilized world, and legislation introduced to prevent their molestation. No one is opposed to the erection and maintenance of museums and picture-galleries at great cost, where all is inanimate; how much less then should the ground be begrudged for the maintenance of the living objects themselves in all their beauty amidst their natural surroundings.

5. Reserves, especially of forest, that may serve as resorts for picnics and for recreation.

Most of the reserves already mentioned serve, in part, the above purposes. What are here meant are rather pieces of forest near centres of population, and which need not, of necessity, be in their virgin condition. It is reserves of this class, by no means the most important, that are most generally associated with the term "scenic reserve" in the public mind.

An excellent account of the origin and development of the scenic-reserve movement is to be found in the report on scenery-preservation for the year 1906–7, pp. 1–3. Here some of the main facts are briefly stated. From its foundation the Department of Lands has aimed to conserve suitable areas of forest lands as State forests, public-recreation reserves, domains, thermal-spring reserves, areas of protection for water-supply, &c. Although under the numerous Land Acts power was given to reserve land for such purposes as the above, it was not until the Land Act of 1892 came into force that scenery-preservation was added to the object. Since the above date areas of specially attractive forest or land surrounding remarkable natural objects—*e.g.*, waterfalls, caves, and thermal springs—have been regularly set aside and excluded from sale.

In 1903 Sir Joseph Ward, then Minister in charge of the Tourist Department, brought down the Scenery Preservation Act. This provided for a Royal Commission to visit and report upon all areas possessing scenic or historic interest, or on which there were thermal springs, and submit recommendations for the acquisition of such as seemed desirable, whether Crown, freehold, or Native. For two years the Commission performed this work; but in order to provide simpler machinery an amending Act was passed terminating the Commission and substituting a small permanent Board of Government officials, consisting of the Surveyor-General, the head of the Tourist Department, and the Commissioner of Crown Lands for each land district, to investigate and report from time to time on all areas worthy of inspection. This body, known as the Scenery Preservation Board, acts as an advisory Board to the Government. By the Act of 1903 a special vote towards expenses of purchasing and dealing with lands selected for scenic reserves appears in the annual appropriations. In 1910 the Scenery Preservation Amendment Act became law; this added the Under-Secretary of the Native Department to the Board, and provided the power to take Native lands for scenic reserves. The Minister was also empowered to grant leases or licenses over open or cleared portions of scenic reserves for short periods not exceeding five years. The Governor may, in certain cases, revoke the reservation of land no longer suitable for scenic purposes, and dispose of the land as Crown land, but the price so obtained must be paid to the credit of the scenery-preservation vote. Finally, the whole of the reserves were made sanctuaries for the flora and fauna, so that no firearm may be discharged on a scenic reserve nor may any bird or game be killed thereon. In 1907 Mr. E. Phillips Turner was appointed Inspector of Scenic Reserves, a post which he still holds, and the duties of which he has fulfilled in an exceptionally able manner.

Regarding the Uplifting of Scenic Reserves.

From time to time requests are made to the Minister of Lands to uplift certain of the scenic reserves. The reasons given for so doing are for the most part that the land is suitable for farming purposes; that it harbours noxious weeds, which spread on to the neighbouring land; that it has been burnt more or less, and so no longer serves its purpose; that no one makes use of it for purposes of picnics; and, finally, that it is certain some day to be destroyed by fire.

It is rare to find a unanimous expression of opinion amongst those residing near a reserve as to whether it should be uplifted or the contrary, but generally a strong and possibly a biased plea is put forth on both sides of the question. In any case, it must not be forgotten that any scenic reserve is not merely constituted for the benefit of those in its immediate vicinity, but also for the people of New Zealand as a whole. For example, a reserve of virgin kauri forest is really of less moment for the neighbouring settlers than it is for those further to the south who have never seen a kauri-tree growing naturally.

The scenic reserves which have been set up at the instance of the Scenery Preservation Board have not been constituted such without a thorough examination as to their necessity. They are not proclaimed offhand; on the contrary, a considerable period must elapse between the suggestion of an area for reservation and its being finally gazetted. Further, in no few instances have they been created at the instigation of the settlers in the neighbourhood.

Another class of scenic reserve is, however, constituted in a manner different from the above. At present, and for some considerable time past, there has been a standing order that a Government surveyor, when cutting up forest land for settlement, must set aside at stated intervals small areas as scenic reserves. This procedure, though undoubtedly admirable in theory, is, unfortunately, not always a success in practice. The piece selected may occupy extremely good land; it may be in a position required for building-sites, roads, &c.; it may abut on the property of one quite unsympathetic as to scenery or preservation of plant and animals, and who would fain use the reserve as grazing-ground for his stock. Further, the wholesale and necessary burning of the newly settled forest-area makes it very difficult even for the most sympathetic to avoid letting his fires encroach on one or other of the small reserves. Once the fire enters the forest the trees are more exposed to wind, the danger from a fire is much increased, and on the now bare ground weeds can gain a foothold. A reserve such as described soon becomes worthless for its specific object and a menace to the adjoining farm lands. Happily not many cases such as the above have come under our notice.

With regard to the question of uplifting scenic reserves in the future, we are of opinion that no reserve should be uplifted without there being the strongest possible reason for so doing, and that in considering any special case the following points be taken into consideration: (1.) Is the reserve valuable from the scenic standpoint? (2.) Does it represent some special type of vegetation of which there are few or no examples in existing reserves? (3.) Does it mark some important historic spot? (4.) Does it afford a haven of refuge for some specially rare plant or animal? (5.) Has the agitation for its uplifting arisen from some one or more of the neighbouring settlers wanting the land for himself or themselves? (6.) Does it harbour noxious weeds, and, if so, does it contain more than the adjoining lands? (7.) Is its upkeep, owing to necessary eradication of such weeds, too great to warrant its retention? (8.) Has it been so much damaged by fire as to no longer fulfil its original object?

The reserves now set aside for scenery purposes number 518, which belong to the following distinct categories: (1.) Reserves gazetted under the Scenery Preservation Act and the Public Works Act up to the end of the year 1911–12, 262. Reserves of this class are inalienable, and are also sanctuaries for the fauna and flora. (2.) Reserves for scenery under the Land Act and the Public Reserves Act up to the end of the year 1906–7, 256.

There are also five national parks, viz.: The Tongariro, the Egmont, the Waimakariri, the Mount Cook, and the Otago Sounds. These parks, although of considerable extent, consist for the most part of extremely steep land, much of which is at a high altitude and altogether barren. There are also three islands set apart for the protection of the New Zealand birds, viz.: The Little Barrier Island, Kapiti Island, and Resolution Island. Finally, a considerable portion of Stewart Island has been set aside as a reserve for the fauna and flora, the whole of the area as it is at present being without any agricultural value.

Proposed New Scenic Reserves.

We recommend the following to be constituted scenic reserves:—

1. *The Poor Knights Islands.*—These islands contain a most interesting vegetation, one beautiful shrub, at any rate, being confined to them, and they are also the home of many birds now almost extinct on the mainland. The islands are absolutely unsuitable for settlement.

2. *Lake Waikaremoana.* — This proposed reservation is important both from its preserving the great beauty of the scenery and its helping to conserve the water-supply of the lake. We recommend that all the land from the water to the skyline be made a scenic reserve. We also consider it very necessary that a resident caretaker be appointed, and would suggest that the keeper of the boardinghouse near the lake be offered the post at a small retaining fee. It would be well that the caretaker should have the powers of a Crown Lands Ranger.

3. *Certain Lakes in the Rotorua Thermal District.*—The reserves here proposed are also important for climatic purposes. We recommend that early steps be taken to acquire from the Native owners all the forested land (about 11,000 acres) bordering the Lakes Rotoiti, Rotoehu, Rotoma, Okataina, Rotokawau, Tikitapu, and Rotokakahi, and that funds for the purpose be provided by opening for settlement an area (about 11,000 acres) of forest, bush, and scenic reserves that are not required in the Rotoiti and Rotoma Survey Districts, such settlement to be preceded by the milling of the timber. The specific areas referred to above are shown on the map on file 375, Head Office, Lands Department.

4. *The Wanganui River.*—Your Commissioners thoroughly recognize the importance of the scenery on the banks of this famous river as a valuable asset to the Dominion. The portion between Pipiriki and the house-boat is the finest part of the river, and it is most important that the vegetation of as large an area as possible be preserved in its virgin condition. We recommend that the Government acquire for preservation all steep banks of the Wanganui River not already reserved, and where the land is not suitable for settlement. The reservation to be from the water to the skyline.

5. *The Mokau River.*—The scenery of the Mokau River is very fine indeed, and it is imperative that as much as possible of the characteristic vegetation of its banks be reserved. We therefore recommend as follows: That the Government should acquire for preservation of the forest all the steep lands bordering on the Mokau River, and that the block of Crown land in Blocks V, IX, and XIII, Aria Survey District, be exchanged on an equitable basis for the land acquired along the river.

The Waipoua Kauri Forest.

The matter of milling the timber of the Waipoua Kauri Forest so that the land it occupies may be available for settlement has been specially brought before us. In order to ascertain the facts of the case, we took evidence in Dargaville from both those who wished and those who opposed the lifting of the reservation. We also visited the forest, devoting the greater part of two days to its examination. After carefully weighing the evidence on both sides of the question, and taking into consideration our own observations made during our present visit to the forest and previously, we recommend that the reservation on the Waipoua State Forest be removed subject to the following contions: (1.) That the timber be milled by the Crown for the people of New Zealand. (2.) That 200 acres of the most characteristic and healthy parts of the forest be reserved permanently. (3.) That the Warawara State Kauri Forest be also reserved permanently. (4.) That both the reserve of 200 acres of the Waipoua Kauri Forest and the whole of the Warawara Kauri Forest be established as national kauri parks for the benefit of the people of New Zealand by Act of Parliament.

Our reason for the above decisions are as follows: (1.) The area of the forest is altogether too large for a permanent reserve. (2.) If the whole forest were reserved, much of the neighbouring land would be excluded from settlement. (3.) After milling, the land now occupied by forest will support a certain number of settlers. (4.) Although situated in almost the wettest district of the North Island during an abnormal dry season, the forest would be in danger of fire. (5.) The forest is a very ancient one, and the kauri-trees are not regenerating, so that as they die they are succeeded by taraire and other trees. (6.) The reserve of 200 acres, as suggested, and the Warawara Forest would supply admirable examples of kauri forest which would be a source of great attraction to visitors from abroad and to our own people. (7.) The Warawara State Forest is situated near the sea-coast to the north-west of Hokianga Harbour on broken hills having an altitude of some 1,600 ft. to 2,000 ft. The forest is extremely wet, and there is very little danger from fire. Owing to the position of the forest, and the rugged nature of the country, it would be difficult and expensive to remove the timber. We are of opinion that the forest is admirably suited for the purpose recommended above.

The Preservation of Scenic Reserves.

At the present time many of the scenic reserves are not as well cared for as they ought to be. They are frequently not fenced, and stock belonging to neighbouring settlers stray into them. In no few cases they are exposed to damage by fire. We therefore recommend that where possible the scenic reserves shall be fenced, and steps taken by planting shelter-belts, or otherwise, to preserve the forest, and that no stock shall be allowed to graze therein.

The provisions of the Scenery Preservation Act are stringent enough, but they are for the most part disregarded. As this is in many cases the result of ignorance of the law we recommend that notices *re* the reserves be placed not only in conspicuous places in the reserves themselves, but also in public places in the neighourhbod, such as post-offices, railway-stations, &c.

2. As to which of the Forest-areas are not required for Climatic and Scenic Reserves or any other National Benefit, but are Suitable for Settlement, Sawmilling, or other Commercial Purposes, with Indication as to Present or Future Utilization.

Except in the specific cases dealt with in Appendix B, we can only deal with the above matter in such a general manner as to give a lead in future transactions with forest-areas. It may be stated as a broad principle that no forest land, except it be required for the special purposes of a climatic or a scenic reserve and which is suitable for farm land, should be permitted to remain under forest if it can be occupied and resided upon in reasonably limited areas.* Should the area under consideration contain milling-timber the question will arise whether it be more profitable to mill before settlement or to fell, burn, and grass. Obviously the answer is purely one of finance, and each case must be dealt with on its merits, the main factors being the enhanced value of the timber if reserved for a stated period, its distance from the centre of demand, and the expense of the milling. Year by year timber formerly considered as far too distant from any market is being profitably milled. We strongly recommend, in consequence of the increasing scarcity of timber, that all land containing milling-timber shall have such converted prior to settlement.

The question with regard to the present or future utilization of the forest-areas as a whole would entail a most careful and detailed examination of all the forest land throughout the Dominion, a task quite impossible for us to have attempted. All that we can say is that the matter is, in the main, one of supply and demand, and each case as it arises should be judged on its merits, and with special regard to the financial aspect, and that the view of the proposed Advisory Forestry Board should in all cases be obtained and given effect to wherever possible.

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* National parks and sanctuaries are not specifically mentioned, since they are really in the same category as scenic or climatic reserves.

We have examined a number of reserves so as to decide which should be retained or which should have their reservations removed. Our decisions regarding such lands are given in Appendix B.

3. AS TO THE BEST METHOD OF DEALING WITH THE INDIGENOUS FORESTS IN THE PUBLIC INTERESTS GENERALLY.

(1.) *Classification of Forests.*

Up to the present there has been no economic classification of the New Zealand forest, although such would simplify matters when dealing with specific areas. We therefore suggest that the following classification or one on similar lines be adopted: (1.) Forest containing valuable milling-timber in a suitable position for profitable conversion and situated on land suitable for settlement. (2.) Forest containing valuable milling-timber which cannot be converted at a profit as yet, but growing on land suitable for settlement. (3.) Forest containing valuable milling-timber growing on land unsuitable for settlement. (4.) Forest containing insufficient or unsuitable milling-timber growing on land suitable for settlement. (5.) Forest containing insufficient or unsuitable timber growing on land unsuitable for settlement.

With regard to the above classification, in considering the value for timber and settlement respectively it is probable that certain factors in the future may lead to various modifications. Thus there may be a use for some timbers which are not, or are but little, converted at present—*e.g.*, tawa, taraire, and the various species of the New Zealand beech; various preservative treatments of timbers may come into use; certain species of trees may be found suitable for wood pulp or the making of wood-spirit, acetic acid, &c.

(2.) *Administration of the Milling Forest.*

With regard to the administration of the milling forest, the time has arrived when the remaining millable forest in the Dominion should be administered on one system, under the jurisdiction of the Land Boards, and the method that we would recommend is the one adopted in the Auckland Land District, where the trees are measured and the superficial contents computed before the timber is offered for sale either by auction or tender. By this system the sawmiller knows exactly what he is paying for, and he is induced to cut the bush out cleanly. The State also receives the best price for the timber. At present in some districts the timber is sold on a royalty basis on the output of the mill, in others the timber is sold on a rough estimate of the amount growing on a given block. This estimate, in some cases, is made by the surveyor who is employed and paid by the sawmiller. For obvious reasons this procedure appears to us to be a very objectionable practice. In other districts the jurisdiction is vested in the Warden, and the leasing of timber blocks treated as a mining privilege, although the royalties derived therefrom are territorial revenue.

It appears to us that what may have been good policy in days gone by, when gold-mining was the predominant industry and timber of little value, can hardly be considered adapted to present circumstances, when the rapid depletion of our forests is taken into account.

We would most strongly indorse the recommendation of the Royal Commission on the Timber and Timber-building Industries of 1909, that the dual control of the timber by the Warden should be terminated and the sole jurisdiction vested in the Land Boards for the following reasons:—

1. The Warden has no staff to supervise the efficient and economical working of the timber leases.

2. From the nature of his training he is not likely to be a man experienced in timber matters.

3. In treating a timber license as a mining privilege, and granting leases

for forty-two years, the land is often held for unreasonable periods and barred from settlement.

4. In some cases the Warden's Courts are held in small decayed mining townships where the Clerk of the Court may be the local constable; such constables are liable to frequent transfer, with the result that the collection of timber royalties has in some cases been allowed to get into arrears, and then, through millers becoming insolvent, large sums have been lost to the Crown. Instances of this have been brought under our notice.

5. Mr. J. S. Evans, S.M. and Warden for Nelson, in his evidence before your Commission, gave his opinion that the sawmilling industry could be better administered by the Commissioners of Crown Lands and the Land Boards.

The only argument that we have heard advanced against the change has been that the Warden's Court is held at more frequent intervals than the Land Board meetings, thus enabling millers to transact business with less delay; but this reason cannot be maintained when it is seen that in Auckland, the largest land district in the Dominion, and with some of the sawmills two hundred miles away from the city, the timber is administered by the Land Board with satisfaction to both the sawmillers and the public. Two interesting letters on this question received by your Commission from sawmillers in Westland are printed in Appendix C.

Among the advantages of having the jurisdiction under the Commissioners of Crown Lands and Land Boards the following may be noted: (1.) The Commissioner has the necessary staff to supervise the economical and efficient cutting of the bush. (2.) He can enforce conditions that the timber should be cut within a reasonable time and the way be prepared for settlement before the second growth and noxious weeds take possession of the ground.

We are of opinion that Regulation 105 of the regulations under the Mining Act, 1908, should be revoked, with the possible exception of the clause relating to the use of firewood for domestic purposes, and even this should only be allowed to be taken in places to be prescribed by the Commissioner. Immense damage has been done in the past to the Crown forest by the indiscriminate cutting of timber by the miners, and we fail to see any reason why this one industry should be subsidized at the expense of the State more than any other.

In regard to the payment of halves of timber royalties to local bodies, while we hold that the principle is sound in cases where the roads are used by the millers in carting their timber, still in some districts not 20 per cent. of the timber ever goes on the roads at all. The sawmillers make their own tramways to the railways, and thence it is sent direct to the ship's side. In these cases we consider an amendment of the law is required, and that the half-royalties should only be paid on timber which is conveyed by road. As the law at present stands some districts get large subsidies without any corresponding liabilities, and other districts get nothing.

As we are recommending further extensive planting, we consider that the revenue derived from the timber industry might with benefit be applied to the purpose of providing the necessary funds.

(3.) *The Beech Forest.*

There are very considerable areas of beech forest, both at high and low levels, which are at present but little used for their timber, though this is of considerable value for certain purposes, and will doubtless be more prized as the general timber-supply decreases. Further, these forests are the only ones amongst those indigenous to New Zealand which may regenerate rapidly enough to warrant their permanent retention. At present, as seen from evidence before your Commission, beech timber is steadily coming into use, especially silver-beech (*Fagus Menziesii*), which makes excellent furniture, for which purpose it is being increasingly used in Australia. So long ago as 1899, Mr. T. Kirk, in his admirable "Forest Flora," p. 176, wrote of this timber as excellent for the manufacture of ordinary furniture, and stated that, "When frenchpolished it bears a considerable resemblance to plain mahogany." In order to thoroughly test the question as to the rapidity of regeneration in the various classes of beech forest, we recommend that the Government cause to be made at an early date an expert survey of the beech forest; such a survey would settle not only the question of profitable regeneration, but the state of the trees with regard to disease would be determined. This latter is a matter of much moment, since it is highly probable that much of the contradictory evidence regarding the durability of the timber has arisen through diseased trees having been converted. As a part of the proposed survey of the beech forest, the timber of the different species could be tested in several directions.

Regarding the popular names of the various species of New Zealand beech there is the greatest confusion. In the first place, the incorrect term "birch" is of almost universal application throughout the Dominion, and under this head are included not only the beeches proper (*Fagus**), but also the tawhero or kamahi (*Weinmannia racemosa*), the tawhiri (*Pittosporum tenuifolium*), the tipau (*Myrsine Urvillei*), and putaputawheta (*Carpodetus serratus*). This grouping together of absolutely different timbers under the one name "birch" is bad enough, but it is a small matter compared with the fact that each species of beech (*Fagus*) bears a different name in different districts. Thus *Fagus fusca* is known as "red-birch" in Wellington and as "black-birch" in Westland, in which district "red-birch" is the kamahi, while "black-birch" is *Fagus solandri* in Canterbury. So, too, *Fagus Menziesii*, the species esteemed for furniture, is "brown-birch" in Southland and "silver-birch" in Wellington, while it is called in some places "white-birch" and "red-birch." It is plain that such confusion of names must lead to endless mistakes in regard to the proper timber being supplied, and that much monetary loss might accrue thereby. We therefore consider that the Government should issue an illustrated pamphlet on the value of the different beech timbers in which definite names are applied to the different species. We propose that the misleading term "birch" be abandoned, and that the name "red-beech," "black-beech," and "silver-beech" be applied to *Fagus fusca*, *F. Solandri*, and *F. Menziesii* respectively. These names should be alone used in the publications, advertisements, and tenders of all Government departments.

4. AS TO WHETHER OR NOT, IN VIEW OF THE LARGE AND INCREASING DEMAND FOR WHITE-PINE TIMBER IN CONNECTION WITH THE BUTTER INDUSTRY, THE EXPORTATION THEREOF SHOULD BE WHOLLY OR PARTIALLY PROHIBITED.

In order to deal satisfactorily with the above important subject, the matter must be approached from several points of view, two of the most important being a consideration of the value of land for farming purposes on which the white-pine grows, and whether it be feasible to find another timber suitable for butter-boxes, and, we may add, cheese-crates, when the supply of the above timber is exhausted.

The white-pine, or kahikatea (*Podocarpus dacrydioides*), either forms pure forests of that tree alone on low-lying swampy ground so far as tall trees are concerned, or grows in much lesser quantity mixed here and there with the other trees of a New Zealand pine forest. In the pure white-pine forest the yield may occasionally exceed 80,000 superficial feet per acre, though it is generally less than half that amount. In the mixed forest the number of white-pine trees varies greatly, but the yield is almost invariably less than that of the rimu (*Dacrydium cupressinum*), with which it is associated.

As is well known, the soil of the white-pine swamps, when drained and the trees removed, forms the richest of agricultural land, which when grassed is of extreme value for dairy farms. The mixed forest, too, where the white-pine is a subordinate tree, is frequently situated on good agricultural land.

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* We are using the generic name *Fagus* as it is the one in common use in New Zealand rather than the correct name *Nothofagus*.

It has earlier on been laid down in this report as a general principle that no forest land which is suitable for farm lands, except it is required for a scenic or climatic reserve, should be permitted to remain under forest if it can be occupied and resided upon in reasonably limited areas. Since no land is more suitable for occupation than that of the white-pine swamps, when drained, their value in this regard is a strong plea in favour of the removal of the trees forthwith. The matter as to a substitute for white-pine for butter-boxes is a somewhat difficult question, but it does not seem an insuperable difficulty. The use of white-pine for butter-boxes is confined to New Zealand and Australia, whereas in other butter-producing countries, such as Canada, Siberia, and Denmark, other timbers are made use of. It is true that Canadian and Siberian butter is of a lower grade than that of New Zealand, but this is due not to the superiority of white-pine in not tainting the butter, but rather that the butter itself is of inferior quality. The above view is supported by the fact that, although both Victorian and New Zealand butter is packed in white-pine boxes, the former brings a lower price in the English market than does the latter. As for the timbers used for the conveyance of butter in Siberia, Canada, and Denmark respectively, we have no evidence as to what is used in the first-named country, but in the two latter, according to Mr. Cuddie, they are spruce (*Picea alba*) and European beech (*Fagus sylvatica*). The use of beech timber for butter-boxes is interesting, as it suggests a new application for the New Zealand beeches.

In order to approach more closely the question of a substitute for white-pine, the characteristics of a first-class timber for butter-box purposes must be considered. These are: (1.) Non-liability to impart a taste or odour to the butter. This quality is lacking to some extent in all classes of wood, especially if not seasoned. It can be overcome in some cases by first paraffining the wood and, in addition, inserting two thicknesses of parchment paper, which course is recommended by the Dairy Division of the Agricultural Department, even in the case of white-pine. (2.) The wood should be in one piece, at least for the ends of the boxes. This, so far as the sides are concerned, is not essential, and jointed boxes of white-pine are being made use of at the present time. Should dovetailing be discountenanced, then, as the oblong box at present in vogue measures 14½ in. by 11½ in. by 10¼ in., trees less than 1½ ft. in mean diameter would be unsuitable. (3.) A light timber is to be preferred, so that the box should not exceed 10½ lb. or 11 lb. in weight. In this regard every additional pound must add to the cost of carriage to the railway, and were the boxes to be much increased in weight probably the freight for sea carriage would be increased. (4.) The wood should be light in colour, so that the brand will show well and the package be attractive in appearance. White-pine fulfils the above condition, though the wood is more or less yellowish-white. (5.) The wood should be easy to nail, and should hold the nails securely. As it is essential that all butter-box wood should be thoroughly seasoned, the danger of splitting where nailed must also be taken into account. The wood of seasoned *Pinus radiata* is especially good from this standpoint.

Up to the present white-pine has answered so admirably both for the packing of butter and cheese that there has been but little trial made of substitutes. There is information alone on this head regarding poplar, *Pinus radiata*, and tawa (*Beilschmiedia tawa*). Poplar, according to Mr. Cuddie, will probably be a satisfactory substitute. Both butter and cheese have been so packed, so far as non-tainting is concerned, with good results. The timber fufils all the other requisites of a butter-box.

Pinus radiata, according to an experiment conducted by Mr. M. Murphy, of Christchurch, some time ago, was used successfully for the packing of butter, the contents of the case being free from taint after being in the cool chamber, according to a letter he sent your Commissioners, "for the usual time occupied in transport to England" and "packed in the usual way." Tawa was largely used for the packing of butter in the earliest days of the industry, but at that time not nearly the same care was exercised as at present.

In order to gain additional knowledge regarding the suitability of timbers not used as yet for the packing of butter, we, early on in our Commission, with the co-operation of the Agricultural Department, the Leyland-O'Brien Timber Company of Auckland, and the Auckland Dairy Association, to all of whom we are much indebted, caused small boxes to be constructed, each with a capacity for 3 lb. of butter, from the following timbers: Tawa, taraire, poplar, and *Pinus radiata*. The interesting report of the Government Grader upon this experiment may be seen in the Appendix C. Suffice it here to say that the tests, so far as they went, were most encouraging, all the butter remaining in excellent condition and free from taint.

The quantity of *Pinus radiata* and poplar in New Zealand available for butter-boxes, &c., is extremely small, and it would be a considerable number of years before a reasonable supply were available if the greatly extended planting of these trees as recommended by us in Part II of this report be followed.

As for tawa, there is at present a good deal in certain of the indigenous forests of the North Island, but in many places it occupies land that will soon be taken up for settlement, where, as there is little other millable timber, it will be burned and not converted. Nor can tawa timber compete with white-pine under present conditions. How long the white-pine will last at the present rate of consumption we cannot say, since we possess no reliable data as to the area occupied by that tree. There are considerable forests in South Westland which it will not pay to convert for many years to come, owing to their distance from a seaport or railway. To sum up, the substitutes for white-pine must come from abroad until such time as our own plantations are available. We saw in Dunedin an imported butter-box made of Norway spruce (*Abies excelsa*), which seemed suitable and which is supplied at a lower cost than that of white-pine. We have also seen boxes made from wood pulp. Then there are the timbers used in Canada and Siberia for packing butter, which should answer equally well here, and which could be imported probably for many years to come.

Bearing all the above facts in mind, we are of opinion that a substitute for white-pine can be found, first of all in an imported article, and later in timber grown in New Zealand. The following matters may be briefly dealt with which concern our final decision:—

1. White-pine, at one time used as a building-timber in New Zealand, has fallen into disrepute through the action of the larva of a beetle, which brings about the so-called "dry-rot." Consequently the timber is now used solely in the Dominion for butter-boxes, cheese-crates, fruit-cases, and packing material generally. But in Australia the timber is used not for boxes only, but for other purposes; so that the whole of the contents of the log, the waste excluded, can be sold to the Commonwealth. Were such exportation to be forbidden the West Coast Timber Compnay shows that 60 per cent. of the log output would remain in the sawmiller's hands and the price of box-timber would be raised to such a price as to allow the above 60 per cent. to be rejected.

2. Were there to be a restriction on the export of white-pine, then the sawmiller would cease to convert the white-pine trees in his rimu forest, and they would remain only to be eventually burnt in the course of settlement.

3. By arrangement with Australia our white-pine timber is admitted free. We get much valuable hardwood timber from Australia, and were the exporting of our white-pine to be prohibited Australia might decline to let us import her hardwoods. After a careful consideration of all the points dealt with above, we recommend that there should be no restriction whatsoever imposed upon the exportation of white-pine. Further, in view of the great importance to the State of finding and providing a substitute for white-pine for the packing of butter, we consider it advisable that the Dairy Produce Division of the Agricultural Department should conduct an exhaustive series of experiments with regard to the capabilities of various timbers for butter-boxes, especially *Pinus radiata*, *P. Laricio*, the various kinds of poplar, Oregon pine (*Pseudotsuga Douglasii*), the various species of New Zealand beech, tawa, and taraire.

Regarding such experiments the following may be stated: (1.) Each experiment must be on a sufficient scale to preclude any experimental error. (2.) All timber must be properly seasoned. (3.) The ages of all the exotic timbers should be ascertained. (4.) Each set of experiments must be conducted with an exactly similar dairy-product. This also applies to the control of white-pine boxes. Grading must take place before packing and when unpacked. (5.) If *Pinus radiata* is a success that tree would naturally be recommended on account of its afforestation qualities as detailed in Part II of this report. There should be experiments with trees of that species of different ages, and also from timber seasoned both before and after milling, as well as from timber milled when green.

PART II.—AFFORESTATION.

1. As to the Probable Future Demand for Timber for Commercial Purposes in New Zealand.

The question here asked is one of extreme difficulty and complexity, and the answer could be little more than a guess, even were far more reliable statistics available than is at present the case. Before the subject can be approached with any degree of accuracy the following questions amongst others must be answered: (1.) What will be the increase in population of New Zealand at the end of certain definite periods? (2.) To what extent will the demand for timber increase or decrease in each timber-using trade and industry, including the demand for box timber? (3.) What will be the influence of substitutes for timber on the future demand?

When we turn to the latest issue of the "Statistics of the Dominion of New Zealand" there is nothing given as to the amount of timber used by different trades and industries. All that is available is the cost of materials, of which wood may be the principal or but a minor component, according to the special trade.

From the publication mentioned above the output of the sawmills may be fairly gauged, but so far as posts and rails are concerned their value alone is given, and an exact estimate of this into superficial feet is impossible. So, too, with regard to imports of timber; so far as laths and shingles, undressed logs, palings, and rails go, the number imported of each is the only data available. As for the amount of timber milled from plantations, and the quantity privately cut for posts and other purposes, there is no information of any kind.

Leaving any attempt at approximate exactitude out of consideration, we may reasonably consider that, although there will be a decrease in the use of certain timbers, judging from past and present experiences, there is certain, for a long time to come, judging as before from actual experience, to be an increase in other directions, and that at the very least we may assume that the gain will counterbalance the loss. Opinions have been expressed in evidence given before us that the future will see great strides in the matter of timber substitutes, and that we need not trouble as to our future timber-supply, nor make provision for the future demand. Such reasoning is not legitimate. In making an estimate as to future needs we cannot consider problematical inventions of timber substitutes nor undreamt-of discoveries. All we can do is to consider an extended use of such substitutes as at present exist, and base our conclusions thereon, while at the same time considering the increase of population, with its increasing demand for timber, based on the present consumption, and the probable progressive development of certain industries now on the increase and likely to so continue, such as the dairy and fruit industries, both of which require an ever-increasing supply of timber

We estimate the amount of timber consumed yearly in New Zealand at the present time as being 358,000,000 ft. As seen from what has gone before, there is no reason to assume that the amount consumed per head of the population will decrease. On the contrary, notwithstanding substitutes for timber, the *per capita* consumption in certain countries appears to be on the increase.

Assuming that the population of New Zealand will be doubled in thirty-five years, then, taking the present demand for timber as a basis, and multiplying by two, the probable future demand at that time will be 716,000,000 ft. This, as we have already pointed out, is little more than a guess, but it can quite well serve its purpose here, since when the more accurate statistics are available that we recommend to be procured another much more reliable estimate can be made. Before leaving the subject under consideration, we beg to suggest, in view of the great importance of possessing a more reliable estimate than we have given, that the Government cause exact statistics to be procured regarding the output of the sawmills of the Dominion, and also of that of the travelling sawmills, which even now convert a considerable amount of timber grown on private lands. Details should also be given as to the amount of each class of timber, together with exact quantity used in each trade and industry. Even then, with such statistics as the above available, after deducting the timber exported, the total would not be sufficient, since no account would be taken of the wood from private plantations, &c., used as fuel, fencing-posts, and other purposes.

2. AS TO PARTICULARS *re* THE NATURE AND KINDS OF TIMBER LIKELY TO BE REQUIRED.

To answer this question at all fully a great deal of information would be required similar to that mentioned in the last section, but even more detailed, since not only would a knowledge be required of the class of timber used in each trade and industry, but particulars as to the sizes in vogue. Then there also comes in the estimated increase or decrease of any particular trade. Leaving the above out of consideration, there is no doubt but that the following classes of timber will be required in extremely large quantities: (1) Australian gums (*Eucalypti*) of various kinds, especially those yielding the most durable timber; (2) pines of various kinds for building-timber; (3) timber for the carriage of agricultural and other produce. Here *Pinus radiata* comes first, especially as it can be also used for a building-timber. Poplar timber also comes in here, and it is suitable for the manufacture of paper pulp.

3. AS TO HOW FAR THE OPERATIONS OF THE EXISTING STATE NURSERIES AND PLANTATIONS MEET THE PROBABLE DEMAND FOR TIMBER.

On the 31st March, 1912, the State plantations were 18,870 acres in extent. Taking the yields per acre as given by Maw,* since we have as yet no reliable New Zealand data, it appears that the final crop of the following timbers is, in Europe: Silver-fir (*Abies pectinata*), 72,600 superficial feet; Scotch pine (*Pinus sylvestris*), 41,400 superficial feet; Weymouth pine (*Pinus strobus*), 51,340 superficial feet; and larch (*Larix europæa*), 38,400 superficial feet. Since no estimate is made of thinnings in the above figures, and taking into account the greater size that the trees are expected to reach under New Zealand conditions, we have decided on 50,000 superficial feet as the estimated average yield per acre of the State plantations when converted. The total yield, then, of the 18,870 acres would be 943,500,000 ft., which, at the present rate of consumption, would last 2·6 years. At the present rate of planting—namely, 2,566 acres in 1911–12—the total yield, when converted, would be 128,300,000 ft., which, at the present rate of consumption, would last about four months. The determination of the amount to plant yearly in the future will be the duty of the proposed Advisory Forestry Board, who will have more accurate statistics on which to base their calculations. All we can say is that, taking into consideration the expected increase in the crop as more timbers of a high yield are planted, at least two and a half times the acreage of 1911–12 should be planted.

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* "The Practice of Forestry," 1909, pp. 218–23.

4. AS TO WHAT EXTENT THE OPERATIONS OF THE STATE PLANTATIONS SHOULD BE SUPPLEMENTED AND EXPANDED, AND IN WHAT LOCATIONS NEW NURSERIES AND PLANTATIONS, IF ANY, SHOULD BE SITUATED.

This question at once leads to the crucial point of the whole afforestation question—namely, the cost of production of the timber crop and the profit or loss thereon. In considering the financial aspect of afforestation it is essential that a strictly commercial basis should be adopted, in order to see whether any proposed plantation will result in a profit or loss to the State. In the first place, as the average cost of recent loans raised by the Government has come to about 4½ per cent., and as we have no means of knowing whether the rate will come down in the future, we have decided to adopt a 4½-per-cent. basis for our calculations.

Notwithstanding that all the leading authorities on forestry, such as Professors Schlich, Sommerville, and Maw, insist on the fact that compound interest on the initial cost of a plantation, and the annual rental value of ground used, should be charged till the timber is in a marketable condition, there still appears to be a good deal of misapprehension in the popular mind on the subject, some persons questioning the necessity of charging compound interest, or, in fact, any interest at all. Then, again, they argue that if the land upon which the plantations are situated belongs to the Government, no rental value should be allowed for. Perhaps, to make the position clear, it may be well to work out a supposititious case, thus: Suppose the Government had £100,000 either to lay out in establishing a plantation or to advance on loans at 4½ per cent.—if they adopted the latter course, and compounded the interest for forty years, they would at the end of that time have the sum of £581,636, and if the loan was for eighty years the sum would amount to £3,383,010, without any danger from fires or other risks incidental to forests. So it is clear that if money was put into a plantation it should produce timber at least equal in value to the above amounts at the end of the respective periods or the operations would entail a loss to the State.

Again, in regard to the rental value of the land: suppose the Government owned 10,000 acres of land worth £10 per acre, and had to decide whether to lay it out in plantations or to lease it for settlement purposes. If the latter course should be adopted, and the rental compounded as above for periods of forty and eighty years, the amounts would be £481,636 and £3,283,010 respectively; so that here again, unless the timber produced at the end of these periods equalled in value the amount shown in the first computation, plus the amount in this, the State would be a loser, irrespective of the indirect revenue from the tenants.

There is, moreover, another fact to be taken into account in estimating the final cost of the timber produced—namely, the annual upkeep or maintenance charges. On the data available this factor is very difficult to estimate. In the report of the Royal Commission on Coast Erosion and Afforestation in the United Kingdom, 1909, the sum of 4s. per acre per annum is set down for the purpose. We are of opinion, however, that owing to the extra cost of labour, and the difficulties in connection with the fire risks, and the eradication of bracken fern, the above figures would be much too low for this Dominion, and that at least 6s. should be allotted for the purpose stated.

Coming to the cost of the forestry operations already carried out by the Government, the departmental report on State afforestation for the year 1911–12, the latest available, gives the actual cost to date of State nurseries and plantations as £218,433 14s. 2d., to which must be added £30,698 16s. 4d., the value of labour performed by prisoners but not charged for by the Justice Department. No interest on the capital expended nor rental value of the land occupied has been allowed for, but probably if the present value of stock in hand, buildings, implements, and permanent improvements are taken into account they would balance the two latter items. The return shows 18,870 acres as having been planted, and dividing that into the sum arrived at as above gives the cost of each acre now under trees and its upkeep to date as £13 4s.

It is recognized, however, that a great deal of the earlier work done in the plantations was more or less of an experimental nature, and we are of opinion that the present cost of planting an acre, as estimated by Mr. R. G. Robinson—namely, £7 16s. 6d.—should be close to the mark, and we therefore take the round figure of £8 in basing our estimates. This compares favourably with the amount—£6 10s. per acre—given in the report of the Royal Commission on Afforestation in the United Kingdom, when the extra cost of labour is taken into account.

To show what financial result may be expected from the planting of trees that come to early maturity and produce large amounts of timber, such as *Pinus radiata*, poplar, and certain of the *Eucalypti*, in conjunction with land of low rental value, the following example is appended. From the evidence before us, we consider that at a moderate estimate an acre of *Pinus radiata* would produce 150,000 superficial feet of timber at the age of thirty-five years. Taking the value of the land at £2 per acre the figures would work out as follows :—

Expenditure.

	£
10,000 acres planted at £8 per acre at 4½ per cent. compound interest for thirty-five years ...	373,360
Rental value of land at £2 per acre at 4½ per cent. compound interest for thirty-five years ...	73,346
Annual maintenance charge of 6s. per acre at 4½ per cent. compound interest for thirty-five years	244,488
	£691,194 (approximate.)

Estimated Receipts.

	£
10,000 acres, yielding 150,000 ft. per acre, at 2s. per hundred	1,500,000
Deduct expenditure	691,194
	£908,806

If these results should be attained it would mean a profit above all expenses of nearly £91 per acre, and would allow the timber, after expenses of milling and freightage charges are met, to be retailed to the consumer at from 10s. to 11s. per hundred superficial feet.

In contrast to this, take an example of what would be the result in growing trees that take eighty years to mature, and cannot be expected to produce more than 70,000 superficial feet to the acre, in conjunction with land worth £10 per acre :—

	£
10,000 acres planted at £8 per acre at 4½ per cent. compound interest for eighty years ...	2,706,400
Annual rental value of 10,000 acres worth £10 per acre at 4½ per cent. compound interest for eighty years	3,283,010
Annual maintenance charged at 6s. per acre at 4½ per cent. compound interest for eighty years	2,186,671
	£8,178,081 (approximate.)

That is to say, each acre would require to produce nearly £818 worth of timber to square accounts, or, in other words, the standing timbers would have to be sold at about £1 3s. per hundred superficial feet, which is, of course, an impossible proposition. In the last example, even if the land was only worth £2 per acre, £555 worth of timber per acre would require to be produced to balance the expenditure. This latter case shows the utter absurdity of suggesting such a tree as the totara for afforestation purposes. (See photo No. 6.)

In these calculations no account is taken of the value of thinnings, as it is considered that for many years to come the cost of cutting would fully balance any receipts.

We are fully persuaded, however, that given cheap land, economical management, and the right kind of trees to plant, afforestation can be made a highly profitable investment for the State, apart from the secondary benefits of having a good supply of timber to meet the public demand and a possible amelioration of climatic conditions. We would recommend that in future, to keep the forestry operations on a sound commercial basis: (1.) That the Prisons Department should have a credit note for the value of all work done by prison labour. (2.) That 4½ per cent. interest should be debited annually to the cost of the previous year's operations. (3.) That the rental value of the land as assessed by the Government Valuation Department, also on a 4½-per-cent. basis, should be debited to the Forestry Account.

In considering the expansion of the afforestation operations of the State the length of time that the present timber-supply from the indigenous forests will last must be considered. According to evidence before us, the estimate of 33,060,883,437 superficial feet available in the indigenous forests in 1909 is at best a guess, and no one can truly say whether the amount be too much or too little. Our opinion is that it is not safe to conclude that there will be any supply of moment at the expiration of thirty years from the present time, and that unless more stringent methods are adopted to conserve the supply as far as possible the period of supply may be even shortened. From the above it is clear that sufficient provision must be made for the future if we are not to run the risk of a considerable deficiency in our supply of timber. The countries of the Old World are a striking object-lesson to us in regard to afforestation operations. It may be stated briefly that afforestation has been practised to a considerable extent in all civilized countries, and that where economy of method is closely followed it has proved a financial success. The thickly peopled countries of Europe do not begrudge the necessary areas for the work. Even in densely populated Belgium the forest area is 17·7 per cent. of the total area, or 0·2 acre per inhabitant. In Germany the area under forest is 34,989,675 acres. This forms 25·89 per cent. of the total land area and 0·62 acres *per capita.**

Throughout the world timber is becoming both scarcer and more valuable. Quoting from the second Report on Afforestation of the British Royal Commission on Coast Erosion and Afforestation, p. 9, it is stated that Professor Schlich is of opinion that "Since the year 1894 a steady slow rise has taken place, which I estimate at something like 20 per cent." It is further stated in the same report, p. 11, that "Not only do the supplies of timber threaten to prove insufficient to meet the present demand, but it would also appear that the consumption per head of population in this and other countries shows a marked tendency to increase." And again: "Substitutes for timber—steel, concrete, patent compositions, &c.—there are in plenty, but in spite of these timber seems to be more a necessity of modern domestic and industrial conditions."

It may be urged that there is no reason for New Zealand to go in for a comprehensive system of tree-planting by the State since a supply can always be procured from abroad. But the above quotations show that there is but little reliance to be placed upon foreign supplies. Likewise the time may come when it is possible that many countries will forbid the export of their home-grown timber, and there is always the chance of the timber-supply being cut off in time of war. In short, if there is good reason for the countries of the Old World to plant commercial forests, there is far more need for an isolated land such as New Zealand to do so.

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* Zon, R., "The Forest Resources of the World," Bulletin U.S. Department of Agriculture, 1910, p. 48.

Certain parts of New Zealand are treeless, or nearly so, especially Central Otago and the Mackenzie Plains. It would be of the greatest advantage to the State if such were afforested. The former district, owing to constant burning of the tussock and overstocking, including the ravages of rabbits, is virtually a desert below a certain altitude. Tree-planting here would be of the greatest benefit, and, even if carried on at a slight loss, the benefits would be great enough to sanction its adoption.

We are asked in what localities new nurseries and plantations should be established.

1. *As to Nurseries.*

Dealing first with the nurseries of the North Island, we are of opinion that the one at Whakarewarewa is quite adequate, so far as position goes, but that it will soon be too small. Since the pumice lands of the Hot Lakes District are so admirably adapted for afforestation, a large nursery in their vicinity will be required for many years. We recommend, then, that such suitable land as adjoins the nursery should be secured and reserved for nursery purposes, even if at present it be larger than required. So far as the price of the land goes, it must be emphasized that it is false economy to form a nursery for trees upon poor soil. The soil of the nursery should always be better than that of the plantations. Should our recommendations be given effect to, that there should be tree-planting on the dunes of western Wellington, then, as such planting would at first be experimental merely, the trees necessary could quite well be raised at Rotorua. If the gum-lands of the far North are to be afforested, then it might be necessary to have a second nursery in their vicinity; but the question is entirely one of relative cost of conveying the trees from Rotorua as against growing them on the spot, plus the additional expense of forming a new nursery with its necessary buildings.

There are at present three nurseries in the South Island—namely, those of Tapanui, Ranfurly, and Hanmer. It is evident that the expenses would be greatly reduced if there were one central nursery rather than these three. The South Island, too, is well supplied with railways, and it would be an easy matter to transport the young trees to almost any place suitable for afforestation operations. Tapanui, the most important of the present nurseries, possesses a soil difficult to work and by no means suitable for tree-raising; indeed, it speaks volumes for the skill in nursery-work of the Superintending Nurseryman, Mr. R. G. Robinson, that such good results are attained under such adverse conditions. As for Hanmer and Ranfurly, neither is specially suited for the work.

We recommend, then, that a central nursery be established for the South Island in South Canterbury, in the neighbourhood of Studholme Junction. The soil and climate are both ideal for the raising of nursery stock. The only drawback is the high price of land in that neighbourhood. But, as already explained, good soil is essential for the best nursery results, and it is quite legitimate in forestry operations to select the best of land for a nursery. The reasons for our selecting the above locality, and recommending a central nursery, are as follows: (1.) The good condition of soil and climate would enable nursery stock of a better quality to be raised, and the young trees would be suitable for transplanting at an earlier age. (2.) The position close to the Main Trunk line would facilitate delivery of stock to almost any part of the South Island suitable for afforestation. (3.) The expenses of one central nursery would be much less than that of a number of smaller nurseries far distant from one another. (4.) As we propose that the private planter and public bodies be supplied with trees at cost-price the nursery situated where suggested would be in a most convenient position to meet the demand. (5.) The proposed plantations on the Mackenzie Plains could be readily supplied.

2. *As to Plantations.*

During our travels through the Dominion we have paid special attention to the examination of areas not yet set aside which might be suitable for future afforestation. We recommend the following:—

1. An area in Central Otago contiguous to the railway-line and in the neighbourhood of Ophir, Alexandra, or Clyde. We can give no indication of the exact locality. This would have to be chosen with the greatest care, and certainly some experimental planting on a small scale be first of all undertaken. Central Otago is, according to evidence of Dr. Valintine, admirably suited for convalescent consumptives. These benefit much by light employment, such as tree-planting. But any such labour should only be paid for on the basis of the value done, since the afforestation operations cannot be burdened with the cost of charitable aid. If it be considered advisable to assist these patients further it should be done by means of a distinct fund.

2. One or more areas on the Mackenzie Plains. Afforestation here is almost as urgently demanded as in Central Otago, but the conditions for the growth of trees is more favourable. Here again the area to be planted will require the greatest care in selecting.

3. Ancient river-beds of Canterbury beyond the reach of the highest floods. The military reserve on the south bank of the Waimakariri at once suggests itself. Also, if the price be not more than £1 10s. per acre, some of the manuka-covered land between the Rivers Eyre and Waimakariri.

4. The manuka-covered land in the neighbourhood of Hawarden, Culverden Plain. This seems to us the most suitable, and it should be secured if the price is low enough. Already self-sown plants of *Pinus radiata* are growing amongst the scrub.

5. The slopes of Mount Isabel, Hanmer, near the present plantation. If this area be reserved it will be necessary to take in the summit of the mountain, otherwise it would be only taking the better land from the present run and leaving the worst.

6. Run No. 24, near mouth of Rangitikei, 6,360 acres in area, on the dunes of western Wellington, occupied by Mr. J. McKelvie. There are in New Zealand more than 300,000 acres of sand-dunes. A full account of them and their capabilities for tree-planting is given in a report by the Lands Department on the dune-areas of New Zealand. We thoroughly indorse the opinion of the author that the only effectual way to cope with dunes is by planting trees. We also believe that such planting may be a financial success, but, as the author of the above report points out, experiment is required first of all. If the vast dune-areas of the Dominion can be redeemed, and a part turned into profitable forest, the work would pay for its cost several times over, in that the dunes would be no longer a menace to the neighbouring farm lands.

7. An extension of the present areas on the volcanic plateau. A large area should be set aside not only to the north but also to the south of Lake Taupo. The ease in working the pumice lands, and the excellent manner in which trees of many kinds grow, mark out these lands as the most suitable of any in the Dominion for afforestation.

8. Several areas in the gum-lands of the Auckland Isthmus. Probably the neighbourhood of the Bay of Islands or Whangaroa would be very suitable. If the gum-lands can be cheaply afforested with the most valuable though less hardy Australian gums, land now comparatively worthless will be made most productive. But here also experiment is needed in the first place.

With regard to setting aside areas for future plantation we consider—(1.) That such areas should be styled "plantation reserves." (2.) That all such reserves should be made inalienable by Act of Parliament, but that prior to their being required for planting purposes they should be leased as grazing-lands.

5. AS TO WHETHER THE PRESENT OPERATIONS OF THE STATE ARE BEING CONDUCTED ON SATISFACTORY AND PROGRESSIVE LINES, AND, IF NOT, TO WHAT EXTENT AND IN WHAT MANNER THE PRESENT MANAGEMENT AND CONTROL SHOULD BE ALTERED.

In order to approach the above question, a brief history must be given of the afforestation operations of the State. The Forestry Branch of the Department of Lands and Survey was established in 1896. A few experiments had been conducted on a small scale on the pumice lands of the Hot Lakes District in order to test their suitability for a number of varieties of trees. According to official reports* from Messrs. G. Mueller, then Commissioner of Crown Lands for Auckland Province, and R. H. Reaney, Road Surveyor, the above experiments were successful and pointed to the suitability of the vast pumice-area for afforestation. Although up to the year 1896 there had been abundant planting, both public and private, and though there were several enthusiatic tree-planters well versed in the requirements of their own districts, there was no one who could claim a thorough knowledge of the colony as a whole, with its manifold soil conditions and climates. Nor had the planting referred to above been carried on according to the requirements of modern European forestry. The Government, therefore, had a difficult problem to face, nor could it be solved forthwith without a good deal of experimental work. Even in those countries where forestry has been prosecuted on a most extensive scale for a long period there is still ample room for experiment.

Notwithstanding the above, a great deal of knowledge was self-evident from the plantations. It should not have been a hard matter to have learnt what trees were almost certain to thrive in any district, what species would ensure a short rotation, or what it would be risky to plant. Knowledge derived from European or American books and practice was of little moment, and suggestive only compared with the lessons to be learned from the existing plantations. Had these plantations been sufficiently studied the mistakes cited below would have been avoided and the State plantations to-day have been far more valuable.

In 1896 the late Mr. H. J. Matthews was appointed Chief Forester, under the Surveyor-General, who was head of the branch and responsible for its management. Yet, as pointed out in the Report on State Afforestation for 1910–11, the actual inauguration of the scheme was due to Mr. Matthews, who "had the sole technical control of the tree-planting operations" until his unexpected death in 1909. But not only had Mr. Matthews to busy himself with nursery and tree-planting operations, but he had to design the necessary buildings, lay out the various grounds, make roads, and carry on farming operations with the accompanying selection of stock. In short, he had to plan and direct the most extensive operations, involving the expenditure of large sums and the employment and management of many men. Obviously, much of his earlier work was of an experimental nature, and there were failures as well as successes. One part of Mr. Matthews's work, however, stands out conspicuously, and deserves unqualified praise. We refer to the nurseries and their management, which are a striking testimony to his ability and skill. Further, he early chose young men of promise as his assistants, who entered into their work with enthusiasm, so that by degrees there developed a capable staff trained in the technique of nursery and plantation work.

Among the first work was the establishment of nurseries at Tapanui and Eweburn, in the South Island, and at Whakarewarewa, in the North Island. Later on, other nurseries were formed at Hanmer, Kurow, and Starborough, in the South Island; and at Ruatangata, near Whangarei, in the North Island. In the neighbourhood of these nurseries, Kurow excepted, the various plantations have been established, now amounting in all to 18,870 acres containing about 44,000,000 trees. The above nurseries are all in operation excepting Starborough, Kurow, and Ruatangata, all of which were closed and planting operations stopped owing to the alleged unsuitability of the localities in question for afforestation.

The unfortunate death of Mr. Matthews in 1909 led to changes in management. The office of Chief Forester was allowed to lapse, and, instead, a separate officer was appointed to control the forestry operations of each Island respectively, under the title of Superintending Nurseryman, Mr. H. A. Goudie being appointed to the North and Mr. R. G. Robinson to the South Island.

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* Report of the Department of Lands for 1896–97, pp. 110–11.

These officers, who reside at Rotorua and Tapanui respectively, supervise the several nurseries and plantations under their control, and are responsible for the raising and planting-out of the trees in each Island. Under them, in charge of each State plantation, is a forester. These various officials direct the work of each of the labourers and others employed in the tree-planting operations.

In regard to tree-planting operations, a certain amount has to be carried on at Rotorua, Waiotapu, and Hanmer by means of prison labour. Although the actual work done by the prisoners averages less than that by free labour, the value of the work to the community must not be judged alone on a monetary basis. There is no doubt, according to the evidence of Mr. G. C. B. Jordan, Under-Secretary for Justice, and others, that the employment of prisoners in tree-planting is distinctly of benefit to them, and quite likely to lead to their reformation. There is always work in the nurseries or plantations for such as really intend to reform, and it is not uncommon for a prisoner to become in this manner once more a useful member of society. We should be sorry to see a system abolished that is of so much value from its reformatory character.

The administration of the branch is controlled by the Under-Secretary for Lands, to whom the Superintending Nurserymen report, and from whom they may receive orders and directions.

The cost of afforestation is defrayed by the sale of timber in the State forests, supplemented by a contribution from the Consolidated Fund annually voted by Parliament.

The various plantations and other areas are as follows: North Island—Whakarewarewa, 9,024 acres; Waiotapu, 7,695 acres; Puhipuhi, 1,200 acres. South Island—Dusky Hill, 845 acres; Conical Hills, 3,672 acres; Naseby, 1,350 acres; Gimmerburn, 425 acres; Hanmer Springs, 2,668 acres; Dumgree, 881 acres.

In order further to understand the present position of State forestry in New Zealand, the policy and management of the operations from their inauguration must be dealt with. This requires a brief consideration of the following questions: (1.) Are the trees planted suitable for the localities in which they are planted? (2.) Are they the best kinds possible for the localities in question? (3.) Are the trees, even if suitable to the localities, always planted in the best position available? (4.) Has due attention been paid to the urgent necessity for growing trees that give a rapid rotation? (5.) Has sufficient attention been paid to growing every class of timber likely to be required in the future? (6.) Has sufficient provision been made against fire? (7.) Have the cheapest methods been adopted for establishing the plantations? (8.) Are the plantations situated in the best localities available? (9.) Are they in blocks of a sufficient size? (10.) Are they so arranged as to allow the future milling operations to be carried on in the most profitable manner? (11.) Have sufficient experiments been conducted? (12.) Have these experiments been carried on where they can be readily observed? (13.) Had the local plantations of settlers and public bodies been sufficiently investigated prior to the commencement of the forestry operations? (14.) Are the nurseries in the most suitable positions? (15.) Is the method of raising nursery stock conducted on sound lines? (16.) Is the method of procuring seeds satisfactory? (17.) Is there any plan in operation for educating the young men in the service? (18.) Is the management of the nurseries and plantations satisfactory at the present time?

The answer to a number of the above questions is directly applicable to the exact question in our order of reference—namely, "Whether the present operations of the State are being conducted on satisfactory and progressive lines"—for the present operations are in large measure similar to those of the past, in that many of the same trees are being planted, that the methods of planting and nursery-work are very similar, that the nurseries themselves are the same, that the fire-breaks are mostly those which have been in vogue for some time past, that the actual supreme control is the same, and so on.

As several of the above questions interlap, we shall not deal with them individually, but use them rather as the chief points of consideration in what follows.

If we take the list of trees standing in the State plantations as given in "Forestry in New Zealand," we find that up to 1909 the following had been the principal trees planted: Larch, 10,989,835 trees; Austrian pine, 3,769,431; Corsican pine, 3,756,325; various Australian gums, 3,464,589; *Catalpa speciosa*, 2,196,544; English oak, 2,041,621; Norway spruce, 1,242,723; ash, 583,925; totara, 546,500; sycamore, 525,247; bull pine, 291,145; Sitka spruce, 241,623; redwood, 186,641; *Robinia*, 161,800; American white-pine, 137,125; Australian blackwood, 140,335; Bishop pine, 132,025; Monterey pine (*Pinus radiata*), 110,161; alder, 77,918.

From the above it can be seen that larch has been planted in far greater quantity than any other tree, and since that date it has continued to be planted in considerable quantities. It is, however, very questionable whether larch should be used at all for afforestation purposes in New Zealand. Previous experience with this species in all parts of New Zealand, with but few exceptions, shows that, though it may grow well at first, its growth slackens, and it does not eventually form a timber-tree of much value. Nor is this all, for in Europe larch is subject to a most destructive disease, which, if it appears here, would cause enormous loss in the plantations, and possibly lead to their having to be renewed with some other tree, which, in view of the great area under larch, would be a financial disaster. Mr. Goudie showed us a piece of the wood affected with some disease which quite possibly is the larch canker. Further, in order to guard against the disease, the trees must have all their dead branches removed so as to allow free access into the plantations, so that an examination of the plantation in quest of diseased trees is possible. A trial clearing of an acre at Rotorua cost £3, and it would take another £1 to remove the debris. Should even the cost be considerably less than the above £4, the increased expense, at compound interest, would make the planting of larch quite out of the question from the financial aspect. Under the present management of Messrs. Goudie and Robinson the planting of larch still continues, but we are glad to see that it is much less than in the past in proportion to certain valuable pines, as the following figures show: 1909–10 and 1910–11—Larch planted, 5,096,000 trees; Corsican, heavy and bull pines, 8,903,810 trees.

Besides larch, other doubtful and even useless trees have been planted in the past, not in small quantities for experiment, but in large numbers to form permanent plantations. It may be easily understood that no tree should be used, however good it be, if there is a more valuable tree to take its place, and still less (in an operation where every economy must be exercised if a profit is to result) should trees be planted which will not grow rapidly enough, or which yield a worthless timber.

The following examples of certain trees useless for New Zealand afforestation may be cited with the number planted: *Catalpa speciosa*, 2,196,544; totara, 546,500; English birch, 252,710; Norway spruce, 1,242,723; English oak, 2,041,621; sycamore, 225,247; and alder, 77,918. Of the above, the worst case is that of the *Catalpa*, a tree interesting for a botanical collection but useless for afforestation. The planting of an acre or two might be justified, but it is hard to conceive why more than two millions were planted. Some of the trees cited above, although they give valuable timber, are of too slow a growth for profit, such as oak and totara; others, such as sycamore and alder, are comparatively worthless. The present management is growing fewer of these valueless trees, but even yet some are being reared in the nurseries, and the comparatively poor Norway spruce is much more in evidence than the far more valuable Oregon pine.

Planting the wrong trees, or faulty planting, has led in some cases to its being necessary to replant the area. This is now being done, and very wisely in our opinion, by Mr. Robinson at Conical Hills and elsewhere. Errors of this nature are just as costly to the State as destructive fires.

In some cases the trees, though suitable enough in all other respects, have been planted in the wrong position. Thus certain dry slopes at Conical Hills are planted with larch, but the Austrian pine would have been more suitable in the same plantation for such a position.

It has early on been made clear that if tree-planting for commercial purposes is to pay in New Zealand, where both interest and labour are higher than in Europe, trees which supply timber at an early age are essential. To this phase of the question very little attention has been given. And yet it is now well known that *Pinus radiata* will yield a really good second-class timber when from thirty to thirty-five years old, and that many Australian gums grow with the greatest rapidity and have an extraordinary yield. Had these trees been hardy in Europe generally, where afforestation is practised, they would long ago have been included as amongst the important timbers of the world. *Pinus radiata* is now being raised in small numbers in the State nurseries, but in, we consider, quite insufficient quantities.

With regard to the kind of timber required, there has been little attempt to meet the various demands for various classes of timber in the future. The durable wood for railway-sleepers, &c., might be supplied from the larch if the plantations succeed; and there is a certain amount of building-timbers being produced, but rapidly growing cheap timbers for carriage of agricultural produce have been and are being much neglected. It might pay quite well, for instance, to plant *Pinus radiata* much further apart than 4 ft., so as to produce fruit-case and rough-box timber in about twenty-years.

Regarding provision against fire, that is specially dealt with further on in section 10. Here we need only say we consider the present fire-breaks inadequate.

The tree-planting methods, both now and in the past, appear to be on good lines, and where the right trees have been used the plantations are thriving excellently. They are also—the Austrian pine stands excepted—remarkably free from disease.

Generally speaking, the individual plantations are of sufficient size, though it would have been better in some instances to have provided more land from the outset. This is a matter, however, which does not specially concern the present practical management of the planting operations.

Experiments are of the greatest importance, and obviously a good many have been carried out; indeed, much of the earlier planting was experimental. Unfortunately, many so-called experiments were on too large a scale, and can hardly, on that account, be deemed experiments, since their failure entailed considerable loss. A true experiment should be an experiment only, and should be on a comparatively small scale, and there should be no thought of direct profit. Also, planting experiments should be confined to stated places, where they can be watched carefully. As it is at present blocks of experimental planting, many of them far too large to be deemed to be experiments, occur here and there in the general plantations, which when they come to be milled will interfere seriously with the milling operations and entail unnecessary expense in the future.

We have already referred to the importance of an economic survey of the private plantations of New Zealand. Such a survey should have been a preliminary to afforestation operations. Had such been made it is inconceivable that some of the more striking mistakes we have pointed out could have occurred.

During the history of the Forestry Branch of the Lands Department three nurseries have been established and closed down because the localities where they were established were considered unsuitable. The most remarkable example is in the case of Kurow. Here, in 1905, 45 acres were selected which were described as having all the desirable advantages for an ideal nursery.* After about three years' work, and an expenditure of £3,070, some of which was not lost, as certain trees and plant were conveyed elsewhere, the nursery was closed down owing to the climate proving unsuitable. Such a case as this should never have occurred. Instead of erecting buildings and laying out a nursery on a large scale, a little experimental planting and seed-raising should have been made in advance, and the district properly tested as to the capabilities for afforestation before incurring a large expenditure.

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* Report of the Department of Lands, State Forests, 1905–6, p. 16.

We have earlier on in this report spoken in the highest terms of the nursery operations. The present Superintending Nurserymen are continuing to carry them on in an equally if not more creditable manner. The houses, implements, and stock are in the best condition possible. The only criticism we can offer is on the method of procuring seed; this is gone into fully in Part 10, and it is certainly a striking defect, but one which cannot be attributed to the Superintending Nurserymen.

To sum up our views as to the present operations of the State, and whether they are conducted on satisfactory and progressive lines, we consider that, as compared with the past, the management under the direction of the two Superintending Nurserymen, and they again under the Under-Secretary for Lands, is better than in the past, but that there is still room for improvement in the matters specially criticized above. Trees are still being planted which are not suitable; special methods for reducing the expense of establishing the plantations, such as sowing *in situ*, are not being tried; the fire-breaks are not adequate; there is not sufficient provision for educating the young men of the branch in forestry; the method of ordering and procuring seeds could be improved upon; too little attention is being paid to the establishment of quick-rotating crops of trees.

We know quite well the difficulties under which the Superintending Nurserymen have to carry on their very responsible duties. They are really responsible for the whole management — on them all depends — and yet they have no real power, as above them comes the head of the Department, who need not of necessity in the least be acquainted with forestry matters, or have much sympathy therewith. They have also a vast amount of departmental duties to perform, and, in addition to all else, attend to the training of their subordinates, and have to give advice *re* tree-planting to private individuals and public bodies. In short, their duties are multifarious. Further, they have been brought up in the system as it prevails, and it is hardly to be expected that they could make many radical changes in what they have been forced to practise for years, nor possibly would such changes have been tolerated. In Messrs. Robinson and Goudie the Department possesses two most valuable and zealous servants, who are full of enthusiasm in their work, and who are doing their best to make State afforestation in New Zealand a success.

With regard to the future, we consider that certain changes should be made. Two methods are available—namely, either the creation of a special Forestry Department, or the forestry to be, as at present, a branch of the Lands Department. There are valid arguments in favour of both propositions, but after careful consideration we consider that forestry matters should continue to be dealt with under a special branch of the Lands Department, because the branch as proposed below would deal not only with the plantations but with the indigenous forests. As the Lands Department already possesses in the Commissioners of Crown Lands and Crown Lands Rangers the necessary machinery, and men more or less skilled in the work, a great saving would be effected in comparison with setting up another Department with men new to many branches of the work and with a new and complicated machinery. Further, as the land on which the forestry operation would take place would be under the administration of the Lands Department, friction might arise between the two Departments. Nor do we think the magnitude of the operations as yet demand a new Department, but that such is rather a thing of the future.

We consider that the Under-Secretary for Lands has so many other duties to perform that it is quite impossible that he can afford the time necessary for proper supervision of the branch, or for the special studies that the control of a subject so technical as forestry entails. We therefore recommend—

1. That the directing control of the Forestry Branch of the Lands Department should be placed in the hands of an executive officer at an adequate salary, such officer to be of approved administrative and financial ability.

2. That the said officer should have associated with him an Advisory Board of experts in forestry and matters appertaining thereto.

3. That such Board shall consist of not less than four members, who are to be paid such fee as may be prescribed, and to be appointed by His Excellency the Governor.

4. That the Board shall be called together not less than once a quarter for the consideration of matters of policy and important details with regard to the State forestry operations. We also are of opinion that the present Superintending Nurserymen should, under the direction of the proposed Forestry Board, control the operations in the North and South Islands respectively, and that they shall receive remuneration adequate to the important duties they discharge.

Such a Board as composed above would be in a position to confer with the Superintending Nurseryman on many matters of importance. They would also be responsible for changes in method, &c. Forestry is not a science in itself, but is a compound of many sciences together, with a practical knowledge of nursery-work and tree-planting. It seems to us that a combination of men, expert in various branches of the subject, and each man with a grasp of the whole, would be far better equipped to direct the forestry operations of the country than would a young man brought out from Europe or America, who, however well he was acquainted with the forestry practice of his own country and with theoretical forestry, would be altogether ignorant of both New Zealand conditions for tree-planting and of the indigenous forests.

6. As to the Conditions under which the State should encourage and assist Tree-planting by Private Individuals and Local Bodies.

(1.) *Private Tree-planting.*

From the earliest days of settlement up to the present time there has been a good deal of private planting, so that plantations, large and small, are more or less in evidence in all the settled districts. No sooner is the indigenous forest felled and burned than the settler forthwith plants a few foreign trees round his homestead.

Tree-planting by the settler is usually undertaken for shelter purposes with the trees in one or more parallel lines at right angles to the prevailing wind. Sometimes the plantations are a chain or more in width, but, no matter how wide, the trees are nearly always planted so far apart that the lateral branches are not suppressed at an early age, and, in consequence, the timber is of very indifferent quality, through its being full of knots. It is this that has led to the timber of certain trees being considered valueless for building purposes—a quite mistaken conception.

Tree-planting by the settler is by no means universal. We were much struck, for instance, by the lack of shelter-belts on the windswept Southland Plain, where such would be of inestimable value not only to the farmer but to the whole district.

The reasons for private tree-planting are as follows: (1.) To afford shelter from wind, such shelter being beneficial not only for the stock and the crops, but it also protects the ground from loss of water, and favours the formation of the all-important humus. (2.) For providing firewood. (3.) For supplying fencing-material. (4.) For providing timber for rough buildings. (5.) For furnishing wood for handles, &c., for farm implements. (6.) As box-timber for packing purposes. (7.) For timber for sale for building purposes if the trees are planted under forest conditions. (8.) For purposes of beauty. (9.) For increasing the selling-value of the land through its making the farm more attractive

Private planting not only benefits the individual, but, if carried out on right lines, it is of considerable advantage to the State, not only in ameliorating the climate and adding to the beauty of the landscape and attractions of the neighbourhood, but in helping to increase the future timber-supply. In this latter regard it is specially important in that these private plantations are much less likely to be damaged by fire than are those of the State; also, as the plantations are in settled districts, the timber is growing just where it is wanted and the cost of carriage is saved.

Long ago the private planter was considered a public benefactor. The Planting Encouragement Act of 1871 provided that any person planting land of 1 acre in extent or over should be entitled to receive in respect of every acre of land so planted 2 acres of rural land of the waste lands of the Crown.

Bearing all the above statements in mind, and believing as we do that the private owner of land who plants trees of a suitable nature thereon under proper forest-conditions is benefiting not only himself but the Dominion, we recommend that the State should encourage tree-planting on the following lines: (1.) That the trees for such be supplied at cost-price by the State nurseries. (2.) That the planting be under Government advice. (3.) That planting by private individuals should be encouraged by the remission of taxes or otherwise on a certain percentage of the total area of an estate which has been planted to the satisfaction of the proposed Forestry Board.

2. *Planting by Public Bodies.*

A considerable amount of planting has already been done by local bodies. As for private planting, so here too the trees have almost invariably been planted too far apart. This is in some cases being remedied, and afforestation on more modern lines is now being carried on by the Dunedin City Council and certain of the County Councils. Afforestation by public bodies should certainly be encouraged to the utmost. They, too, should receive trees from the State nurseries at cost-price, and any proposed site for planting should be inspected by an official of the Forestry Branch, who should draw up a scheme.

7. AS TO OTHER MATTERS WHICH IN OUR OPINION AFFECT FOREST-CONDITIONS OR WOULD TEND TO TERMINATE THEIR DEVELOPMENT, INCLUDING THE NECESSITY OR EXPEDIENCY OF ANY LEGISLATION IN THE PREMISES.

(1.) *Matters concerning Afforestation.*

In our examination of the various State plantations the following matters especially attracted our notice as requiring alteration:—

1. *The Method of Fire-breaks.*

Nothing is of greater importance in a scheme of planting than an adequate protection against fire. Already in the brief period of New Zealand State afforestation destructive fires have occurred in the plantations at Conical Hills, Dumgree, and Puhipuhi. Where there are vast areas of bracken fern, tea-tree, or tussock, as in nearly all the areas where the tree-planting must take place, the chance of fire in a dry season is indeed great, and the methods of the European foresters, evolved under different conditions, do not meet the case.

At present the fire-breaks consist of ploughed belts 1 chain in width. These belts surround the plantations, and there are others traversing them from side to side. It has been the custom until recently to plough the breaks yearly, but the present practice, in part at any rate, is to lay them down in grass and keep it closely grazed by sheep. Young plantations are even in greater danger from fire than older ones, for the fern or grass closely fills the spaces between the trees for several years. Recently at Waiotapu the breaks have been constructed, according to the evidence of Mr. Goudie, so that a fire fanned by the prevailing wind should strike them obliquely and not at a right angle.

We consider the system of fire-breaks at present existing as altogether inadequate. The danger from fire is not merely from the flame running along the ground, but from that which is carried high in the air, together with sparks and burning material. When the furious winds of New Zealand are considered, the distance which sparks, &c., can travel is very great indeed. Even be the day calm, the fire itself, through heating the surrounding air, will cause a strong draught and consequent carriage of burning material. An adequate fire-break must not only stop a ground-fire, but must arrest all flying burning material. The most effective break of this kind would be a belt of some tall tree that would not catch fire. The wider such a belt, the greater the security. But it must be remembered that no belt or wall of any kind can make a plantation absolutely secure, since a fire may originate in its interior. As for the position of the belts, those on the summit of a ridge are the most efficacious, while those at the bottom of a gully are worthless. The position of belts obliquely to the prevailing wind, as now being adopted, is a change for the better.

Regarding the fire-breaks for the future, we recommend one or other of the species of poplar to be planted in belts. Such a belt on the outside of the plantation might be 2 chains in width, and outside this again a ploughed belt 1 chain wide.

Narrower belts of poplar can be formed inside the plantation and along the sides of roads. As the poplars grow, the ground beneath will gradually be covered with a layer of leaves, which, if dry, become a source of danger from ground-fires. We therefore recommend that experiments should be made with other fire-resisting trees and shrubs, especially such as can be established beneath the poplar. It might be possible to succeed with that great fire-resister the New Zealand fuchsia (*Fuchsia excorticata*) simply by sowing its seeds beneath the trees. The wineberry (*Aristotelia racemosa*), so easily raised from scattering seed, might also be tried. Another safeguard would be to cut down the outermost row of poplars, so that there would arise an outer belt of poplar-suckers.

It might seem at first thought that these belts as recommended would occupy altogether too great an area. Poplar timber is, however, of considerable value, as shown in the next paragraph, and the belts would serve a double purpose.

Coming, then, to the value of poplar timber, Maw writes* concerning the Black Italian poplar: "The wood is soft, white, and tough, and does not easily fracture. It is more nearly fireproof than any other timber, and for this reason is valuable for floor-boards." Clements states† that the cotton-wood (*P. deltoides*) is used for wood pulp, packing-boxes, or locally for timber. Pinchot,‡ referring to the last-named tree, writes that it is used for wood pulp, wagon-bodies, and boxwood material. Maw§ states that Black and Black Italian poplar if near a good market fetch 8d. to 1s. 3d. a cubic foot, but ordinarily 6d. to 9d. Elwes and Pritchard|| state a certain stand of Black Italian poplar, which had been planted forty-eight years, realized £3 each standing when felled to clear the ground. They remark: "It seems certain that no other trees could be planted that would do so well in so short a time." As for Lombardy poplar, the evidence of Mr. Cuddie proves that its wood is satisfactory for butter-boxes. Also, we have in our exhibits a fine sample of the timber cut in Marlborough, together with a butter-box which seems well suited for its purpose.

It would probably be advantageous to plant the poplar fire-breaks in advance of the general planting of pines, &c. The effect of shelter on certain trees is remarkable. This may be well seen in the case of the Oregon pines planted inside a shelter-belt of *Pinus radiata* at the prison camp, Kaingaroa

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* "The Practice of Forestry," 1909, p. 367.

† "Minnesota Trees and Shrubs," 1912, p. 57.

‡ Silvical leaflet 25 of U.S. Department of Agriculture, 1908, p. 1.

§ *Loc. cit*, p. 328.

|| "Experiments on Trees at Colesborne," Quart. Journ. of Forestry, vol. 6, p. 86, 1912.

Plains. Had shelter-belts been previously provided a certain stand of larch at the Dusky Hill Plantation would have grown much straighter than is now the case, and a considerable waste of timber have been saved.

2. *The Planting of Larch.*

We have already in Part II, section 5, given our reasons why we consider too much larch to have been planted. Here, without going into further details, we recommend that, in view of the reasons already given, we consider the planting of larch to be risky, and that it is advisable to cease planting that tree in the State plantations until further experience as to its behaviour is gained.

3. *Other Trees recommended for Planting.*

We specially recommend the following trees for extensive planting in the State plantations: Monterey pine (*Pinus radiata*), Corsican pine (*P. Laricio*), Heavy pine (*P. ponderosa*) Oregon pine (*Pseudotsuga Douglasii*), various varieties of poplar and such Australian gums as have been proved to be the best suited to the localities to be planted. Ash (*Fraxinus excelsior*) should be grown where suitable, but it is not a tree for general planting.

With regard to the poplars, these are to serve the double purpose of acting as fire-breaks and producing timber. As for the gums suitable, there are many trees thriving in various localities in New Zealand which are obviously suited to the local conditions, and from which seed can be readily procured. Seed collected in Australia is to be distrusted for the reasons given when dealing with the procuring of seeds in general. Besides the above-mentioned pines, it is desirable to grow some that would produce fine-grained timber suitable for the finest class of work. For this purpose the Weymouth pine (*Pinus strobus*) is to be highly recommended, since it is recognized as the most valuable pine of the eastern United States. Trial plantings of this tree are doing well at Rotorua, and should they continue to give promising indications as to the suitability of the tree, we consider that it should be planted in increasing numbers. We also recommend that a trial be made of *Pinus excelsa*, which is considered to yield the most valuable timber of any of the Himalayan pines. Seed of this tree can be procured at Queenstown, Homebush (Canterbury), and Greendale (Canterbury).

As it is probable that sand-dune planting will be a feature of the future, we suggest that, in addition to the all-important *Pinus radiata*, the Austrian pine (*P. austriaca*) and the Australian blackwood (*Acacia melanoxylon*) should be made use of. We would also point out the great value of the Norfolk Island pine as a tree for planting where there is full exposure to the sea-spray.

Regarding one or two of the above trees, a few explanatory notes seem necessary.

Monterey pine (*Pinus radiata*) is the tree which has been the most widely planted in New Zealand. It thrives in every variety of soil, from that of rich alluvial valleys to stony river-bed and sand-dune. It will also grow on the steepest of dry clay hillsides. Its rapidity of growth is truly remarkable, and no difficulty would be found in discovering examples from Te Aroha to Southland of trees that had grown on an average of 4 ft. per annum. As generally seen, the trees are growing either isolated or far distant from one another, so that the lateral branches are strongly developed and a timber full of knots is produced. But in many localities the trees, though not planted nearly closely enough, have developed long clean trunks, which upon being converted into boards and scantlings have yielded material that has been somewhat extensively used for farm buildings and in some cases for dwellings, especially in Canterbury. We have examined such structures in several places, and found the timber sound and in good condition, and the buildings quite suitable for the designed purpose. We have also a good deal of evidence regarding the value of *Pinus* *radiata* timber for building purposes both from witnesses whom we have examined and from letters we have received, some of which appear as appendices.

Leaving the question of constructive timber altogether on one side, there is an enormously increasing demand for wood for box purposes, an increase due to the rapid development of the dairy and fruit industries. *Pinus radiata* is admirably suited for the purpose in question, and is now being used for fruit-cases, as also for soap and candle boxes. A deputation from the fruitgrowers at Whangarei urged us to recommend the extensive planting of *Pinus radiata* in the vicinity of that town. Several travelling sawmills are now annually employed in Canterbury during the winter months in converting *Pinus radiata* into building-timber, thus finding employment for men and machinery after the threshing season is concluded. As for the suitability of *Pinus radiata* for growing under forest-conditions, the small Government plantation of that tree at Waiotapu is a true object-lesson in the straight clean trunks of the trees, their evenness and rapidity of growth, and the general vitality of the plantation. Of all the trees in the State plantations, none can be grown so cheaply and readily as *Pinus radiata*, or can be planted out at so early an age. Had *P. radiata* been sufficiently hardy in Great Britain, or in central or northern Europe, or even had it been a common tree in its natural land, its claims to admission into forestry practice would have been recognized long ago. As it is, it is being used extensively for afforestation purposes in Australia, where it also grows with great rapidity. The value of a tree cannot be overestimated which can supply box timber at twenty years of age, and which can so much shorten an average rotation as to yield three crops of adult timber in 120 years or perhaps less under favourable circumstances. There is a never-failing supply of excellent seed of *P. radiata* to be produced in New Zealand, and it is quite probable that by means of selection an improved variety ot the species may be established.

The Corsican pine (*Pinus Laricio*) is closely related to the Austrian pine (*Pinus austriaca*). It thrives remarkably well wherever it has been planted in the Dominion, and grows well in almost any soil and situation. Regarding the actual value of the timber, there is not a great deal of information available to us. Maw* states: "The timber is light, soft, resinous, and durable. It is very similar to that of Austrian pine, but is, when grown in this country, of greater technical quality, and possesses fewer knots. It is worth as much per foot as Scots pine." Kent writes† : For quality, quantity, general utility, and early maturity it may have equals but no superiors among the true pines. . . . Its wood, when matured and seasoned, is very resinous, elastic, and tough; very durable, long grained, and though a little coarse in texture is easily worked." As compared with Austrian pine, the advantages are with *P. Laricio*, in its somewhat more rapid growth, its much weaker development of lateral branches, and its immunity from attack by the aphis, from which the Austrian pine suffers so greatly in many of the Government plantations.

The Australian blackwood (*Acacia melanoxylon*) will grow rapidly on the driest sandhills. It is not hardy in every locality, but it tolerates the frost of the Rotorua district, according to the Forestry Report for 1910–11, p. 23. The timber is much prized in Australia, where it is used for furniture of the highest class and for ornamental woodwork indoors. According to Mueller,‡ it is "the best wood in Victoria for bending under steam; it does not warp or twist. Local experiments gave the strength in transverse strain of blackwood equal to *Eucalyptus* wood of middling strength, approaching that of the American white oak, and surpassing that of the kauri."

4. *On the Procuring of Seed.*

It is a matter of extreme importance that only seed of the highest grade should be used. Nor is it sufficient that the seed should be merely that of the species desired, but rather of the best variety of that species for forestry purposes in any special locality. It has been abundantly proved of late years, through the researches of De Vries, Nillsen, and others, that many of the ordinary seed—samples of commerce—consist not of a number of uniform seeds each producing a similar individual, but that they are rather mixtures, and that there will be more or less non-uniformity, while some individuals will differ so much from the majority that they obviously belong to different races. Variation of the above character is so frequent in certain so-called species of *Eucalyptus* that it is impossible to get a uniform crop from commercial seed, nor will the seed supplied from a number of different localities produce similar individuals. So, too, with *Pinus radiata* is there a great distinction between plants raised from ordinary commercial seed. Remembering these facts, it becomes a matter of prime importance that seed of these variable species should be collected from some *one* tree, which has been proved to produce plants of the required character. The specific name is obviously of no moment in cases such as the above; *the important point is that the seed should come from the one tree*, and such seed might have some special designation such as "M.N." Thus *Eucalyptus* M.N. would always mean that the seed had been procured from the one special tree or its progeny, that tree having been proved of a higher value than the species in general to which it belongs. In the case of *Pinus Laricio* and *P. ponderosa* there are undoubtedly races of these superior for forestry purposes to the average of ordinary commercial seed. It is possible, too, that races for special localities may be procured by such selection, as described above—that, *e.g.*, a more hardy race may be discovered of one or other of the less-hardy gums so valuable for timber purposes. Selected seed of the above character we are calling "pedigree seed," and the original parent the "pedigree tree."

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* *Op. cit.*, p. 208.
† Veitch's "Manual of the Coniferae," 1900, p. 420.
‡ "Select Extra-tropical Plants," 1885, pp. 7–8.

The present method of procuring seed is for the Superintending Nurserymen to draw up a list of what is required and the Head Office of the Lands Department to send the order to a local seedsman. It happens not infrequently that seed of certain of the species desired is not available at the time, and as it appears to be a fixed rule that a definite number of acres must be planted yearly, seed of other species not on the nurseryman's list is procured. This, in our opinion, is a remarkable course to take. It has happened more than once that trees not at all suitable for afforestation purposes have been raised for this reason—as, *e.g.*, *Pinus canariensis* at Tapanui, a tree not possibly hardy in that district. Another matter that we must refer to, and which has led to comparatively worthless trees being planted, is that pressure is sometimes brought to bear on those in authority by quite well-meaning persons, who, judging from examples of certain trees in their neghbourhood, or even from hearsay, are persuaded that such would be admirable for afforestation purposes. An idea such as the above is fallacious. The behaviour of a tree in one district is no certain criterion of its thriving elsewhere, and undoubtedly no tree should be used for afforestation until a full knowledge of its capabilities is ascertained.

Taking into account the matters discussed above, we recommend—

1. That seed, if not procurable from trees growing in the Dominion, should be procured direct from the best available foreign sources.

2. That, where possible, seed from selected pedigree trees should be collected in New Zealand by the Department. As an example of this latter case there are several trees of a form of the cider-gum (*Eucalyptus Gunnii*) growing on private property at Tapanui and plainly suited to the conditions of that locality. The finest of these trees could be selected as the pedigree tree, and from it alone seed be collected. So, too, with one tree or other in the important gum-plantation, preferably the one with rough bark, on the property of Mr. R. Reynolds, Cambridge, Waikato.* In this connection it gives us great pleasure to state that Mr. Reynolds has offered to allow the Lands Department to collect seed from these trees, and we thank him most sincerely for his generous offer.

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* See Appendix C, and also remarks in the introduction.

3. That the Lands Department should procure the seed at an earlier date than hitherto, and not keep back the order until such time as the annual amount for afforestation is voted by Parliament.

4. That in the event of failure to obtain the amount of seed required, it is better not to sow at all than to sow substitutes of a less valuable character.

5. *Regarding Thinning of the Plantations.*

In modern forestry practice it is the invariable custom to plant the trees much closer together than they will be allowed to remain for the final crop. This close planting allows a canopy to be rapidly formed, so that the lateral branches, owing to lack of sufficient light, are suppressed and the trees develop straight trunks without branches. After a certain number of years, which differ for different trees, a considerable number of the trees are removed. This process is known as "thinning," and it is repeated at certain intervals.

This question of thinning is perhaps the most difficult and important problem that confronts the management of the State plantations at the present time. Were there a market for the early thinnings, as in Europe, where nearly all the refuse of the plantations can be used, then thinning could be practised without question, but here there is no sale for the large amount of immature timber that would be for disposal. We think, then, that though without doubt thinning has a most beneficial effect on those trees that remain, it is doubtful whether in New Zealand it is a payable proposition, and we are not sure that it might not be better not to thin at all and so allow the law of the survival of the fittest to operate. Which is the more payable plan time and experiment will alone show.

Regarding the plantations of the future, there is no doubt that as population increases there will be a market for all our thinnings, and that the ultimate value of the crop will be increased.

6. *Sowing* in situ.

The method of raising trees by sowing directly where the plantation is to stand is one well recognized in European practice. Thus Schlich devotes twenty-five pages to the subject,* detailing various methods. In New Zealand, too, many plantations of Australian gums have been raised from seed. But in the Government plantations, except for a few oaks and chestnuts, nothing of moment has been attempted. With regard to sowing *in situ*, certain early experiments were carried out by Mr. H. Matthews, but under very adverse circumstances, and it may have been their failure that led to sowing *in situ* being considered a valueless method. Mr. Goudie, too, more recently has conducted a few experiments which also ended in failure. The following observations have combined to convince us that every effort should be made to find out some cheap and effective method of raising plantations direct from seed. At Waitati, near Dunedin, some standing tea-tree scrub was burned a number of years ago. Growing in close proximity was an old tree of *Eucalyptus numerosa*, which bore an abundance of seed. This latter, blown by the wind, found a congenial seed-bed in the ashes left by the fire, and the young plants came up by hundreds, and, growing faster even than the aggressive tea-tree, rapidly formed a close thicket of gums, which now is a small wood (see photos Nos. 2 and 3). Survival of the fittest has gone on so that at the present time there are numerous young trees with trunks varying from 28 in. to 29 in. in diameter growing at suitable distances, and the smaller saplings, &c., are rapidly being suppressed. If gum-plantations can be raised in this manner, not only is an extremely cheap method of raising gums *in situ* available, but also a great deal of worthless land might be readily and rapidly afforested, such as the Auckland gum-lands. On the tea-tree covered land in various places, especially in the Taupo district, *Pinus radiata* has come up freely from seed.

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* "Manual of Forestry," vol. 2, pp. 151–76.

In the "Transactions of the New Zealand Institute," vol. 16, p. 383, A. T. Urquhart gives an account of how certain *Eucalypti* have spread over the gum-lands from seed.

We consider, then, that a series of experiments should be conducted forthwith in regard to sowing *in situ* on ground covered with tea-tree. We suggest a series of experiments such as the following: (1.) A patch of tea-tree to be burned standing, and seed of some hardy gum sown broadcast. (2.) The tea-tree to be felled and burned, and then the seed sown. (3.) Similar experiments to be made with *Pinus radiata* and other pines.

These experiments need only be on a quite small scale; less than an acre would suffice for each experiment. Land of various kinds should be tested, especially pumice soil, gum-land soil, and tussock slopes on hillsides. If these experiments are successful, then the future of forestry on a sound financial basis would be assured; and if they did not succeed, then the small cost of the experiments would be nothing in a large expenditure, and one would know the value of sowing *in situ* in New Zealand once and for all. It must be borne in mind that one success or one failure is no sound criterion as to ultimate success or failure.

7. UNSUITABILITY OF INDIGENOUS TREES FOR AFFORESTATION PURPOSES.

During our investigations we have been frequently urged to recommend the planting of one or other of the indigenous trees. There is, in fact, a general belief throughout New Zealand that the planting of certain kinds, especially the totara and puriri, would be commercially profitable. This idea is altogether erroneous. Without exception, the timber trees are of much slower growth than those used in forestry operations the world over. A full-grown totara may be five hundred years old or upwards. Photo No. 6 shows a cross-section of a totara log which was a seedling at the time of the discovery of America by Columbus. Even English oak, which we consider too slow for forestry purposes, will grow twice as fast as puriri when both are under the same conditions.

This comparatively slow growth of the trees, together with various other reasons that need not be detailed, place the forests of New Zealand in a different category from those of Europe and America, since it is quite out of the question to practise any method of forestry that depends upon their rapid regeneration.

8. ECONOMIC SURVEY OF THE PRIVATE PLANTATIONS OF THE DOMINION.

Both in the introduction to this report and when dealing with the forestry operations of the State we have referred to the great amount of practical information that would be supplied by a searching examination of the private plantations of the Dominion, including those of the various local bodies. The matter needs no further elaboration. We therefore recommend that the Government causes an economic survey to be made of the various plantations throughout the Dominion.

9. PREPARATION OF A BOOK ON FORESTRY.

It has come before our notice, both from evidence and from informal conversations with settlers, that there is a considerable demand for information regarding the trees to plant in any district, the methods of planting, the time to plant, and so on. In 1905 the Government issued a small book on forestry by the late Mr. H. J. Matthews, which met a wide-felt want at the time of its publication. This work is now much in need of revision, and in some places is misleading. We consider that it should be thoroughly revised and brought up to date. For such a revision the Superintending Nurserymen possess a great deal of unpublished data, the result of their practical experience, and this could be made use of. The proposed survey of the plantations would also be of the greatest value in regard to this work.

10. EDUCATION OF CADETS AND OTHERS.

We do not propose to put forth any elaborate and expensive scheme with regard to educating the younger members of the forestry service. It is undoubtedly essential that every member of the service should have a fair knowledge of those sciences on which the practice of forestry depends. Already, in the Report of State Afforestation in New Zealand for 1910–11, it has been suggested that as the scope of operation widens it will be necessary to give to a few able and intelligent young men a practical training in the nurseries, combined with a scientific education at one or other of the New Zealand University Colleges. A man who seeks a foremost position as a forester must have, amongst other things, a fair knowledge of botany, entomology, chemistry, geology, surveying, and mathematics. Instruction in all these can be supplied by the New Zealand University. It seems feasible that young men engaged in the active work of the Forestry Branch of the Lands Department could be transferred for a time to Wellington, where, in the Head Office, they could be engaged in clerical work for their branch, and at the same time attend lectures and learn practical science in the laboratories of Victoria College. The Government Biologist and others could also be made use of to instruct such men. This is quite a humble scheme, but it might well be the forerunner of a thorough education in forestry. As the forestry-work is bound to increase there will be openings for highly trained men. At present talented students from time to time go, by aid of scholarships, to Europe for purposes of study. Such, if they were guaranteed employment for five years in the Forestry Branch at a commencing salary of £200 per annum, might be induced to study forestry in some of the great schools devoted to that subject in England and the Continent of Europe. It is plainly to be seen that such men would be of the greatest value to New Zealand, and it seems to us that our idea is worthy of consideration.

Before leaving this subject of education we must refer with pleasure to the work already being done on their own initiative in the way of educating the young men of the Department by Messrs. Goudie and Robinson. A full account is given of their methods in the Forestry Report for 1910–11.

11. LEGISLATION REQUIRED IN ORDER THAT CERTAIN OF THE RECOMMENDATIONS IN THIS REPORT MAY BE CARRIED OUT.

We recommend the following:—

1. That the Land Act be so amended as to include climatic reserves in addition to other reserves that can be made under the said Act, and that such reserves cannot be used for any other purposes than those indicated in our report except by Act of Parliament.

2. That a law be enacted making the Warawara Kauri Forest and the 200 acres of the Waipoua Forest, as defined in the body of our report, inalienable national kauri parks.

3. Whereas section 6 of the Scenery Preservation Amendment Act, 1910, absolutely prohibits the use of firearms in a scenic reserve, and as it may be expedient that firearms should be used to exterminate noxious animals that are destroying the vegetation therein, it appears desirable that some amendment of the Act should be made by which the Minister in charge of scenic reserves could grant under proper safeguard a permit for the destruction of such noxious animals.

12. MINOR RECOMMENDATIONS.

We recommend the following:—

1. That an area of 927 acres 1 rood 34 perches in Block XI, Ohinemuri Survey District, Auckland, which has been temporarily reserved for water-conservation purposes should be permanently reserved and vested in the Waihi Borough Council as a source for the town water-supply.

2. That the chain reserve along the Pomahaka Stream bounding the Dusky Hill and Conical Hill Plantations should be closed, as at present strangers cannot be excluded from the ground, thus increasing the danger of fire. We may point out that it was from a fire lit by an angler that the last destructive fire originated in the Dusky Hill Plantation.

This concludes the report of your Commissioners.

In witness whereof we have hereunder set our hands and seals this thirty-first day of May, in the year one thousand nine hundred and thirteen.

H. D. M. HASZARD, Chairman.
THOS. W. ADAMS.
LEONARD COCKAYNE.
SAMUEL I. CLARKE
FRANK Y. LETHBRIDGE.
CHARLES P. MURDOCH.

E. PHILLIPS TURNER, Secretary.
31st May, 1913.

APPENDICES.

APPENDIX A.

PROPOSED CLIMATIC RESERVE AS PER INDEX-MAP.

NOTE.—In the accompanying schedule and map the areas of the proposed climatic reserves are necessarily very approximate, being situated in high rugged country it would be an expensive matter to define the boundaries upon the ground. However, this is not considered necessary at present: they can be sketched in near enough on the office maps of the respective land districts, and should settlement ever extend up to their boundaries they could then be defined by the Settlement Surveyor.

Land District.	Area.	Remarks.
	Acres.	
Southland ..	119,200	On the Takitimu and Longwood Range, for conservation of the streams that have their sources thereon.
Westland ..	534,600	For conservation of headwaters of various Westland rivers.
Nelson ..	947,000	,, ,, Nelson rivers.
Marlborough ..	88,350	,, ,, Marlborough rivers.
Wellington ..	93,820	For extension of Tongariro National Park and conservation of headwaters of the Wanganui River.

APPENDIX B.

Schedule of Reserves reported on by the Commission.

Land District.	Nature of Reserve.	Locality.	Name.	Area.	Recommendation.	Reasons.
Auckland ..	Kauri-gum reserve ..	Swanson ..	..	1,160	Reservation to be uplifted	Suitable for settlement and kauri-gum worked out.
,, ..	,, ..	,, ..	..	420	..	,, ,,
,, ..	,, ..	The Wade ..	..	560	..	,, ,,
,, ..	,, ..	Orewa ..	..	400	..	.. ..
,, ..	,, ..	Taupaki ..	..	100	..	.. ..
,, ..	,, ..	Okura ..	..	61	,,	,, ,,
,, ..	Forest reserve ..	Kamo ..	Kiripaka	1,369	No recommendation ..	No time to return for inspection.
,, ..	,, ..	Hokianga ..	Omahuta	3.000	Reservation to be uplifted	Part of Omahuta Reserve, on which forest is destroyed.
,, ..	,, ..	Broadwood ..	Raetea	10,843	Reservation to remain ..	Very steep hills at sources of streams.
,, ..	State forest ..	Hokianga ..	Waipoua	22.450	Reservation to be uplifted	Part of State forest required for settlement.
Taranaki ..	Forest reserve ..	Inglewood ..	Everett Road ..	166	..	Land suitable for settlement.
Wellington ..	,, ..	Hunterville ..	Rewa	323	..	.. forest burned.
,, ..	,, ..	Rangiwahia ..	Mangoira	1.650	..	.. ,,
,, ..	,, ..	Mangaweka ..	Part Section 29, Block XI, Hautapu Survey District	550	..	,, part of reserve.
,, ..	,, ..	Woodville ..	Woodville ..	2,110	,,	,,
Marlborough ..	Timber reserve ..	Onamalutu Survey District	Section 9, Block VIII	232	..	Bush destroyed.
			Section 4, Block XII	76		

A proposed scenic reserve near Owhango was inspected, and it was decided to recommend the opening for settlement of all the land (after the timber had been milled) except a strip of steep land along the Whakapapa River.

NEW ZEALAND.

DEPARTMENT OF LANDS AND SURVEY.

REPORT

ON

STATE NURSERIES AND PLANTATIONS

FOR THE

YEAR 1912-13.

BY

JOHN STRAUCHON, I.S.O.
UNDER-SECRETARY.

WELLINGTON.
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1913.

1913.
NEW ZEALAND.

DEPARTMENT OF LANDS AND SURVEY:
STATE NURSERIES AND PLANTATIONS
(REPORT ON).

Presented to both Houses of the General Assembly by Command of His Excellency.

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PLANS.

Rotorua Nursery, and Whakarewarewa Plantation	At back.
Waiotapu Plantation	At back.
Naseby Plantation	At back.
Conical Hills Plantation	At back.

Continuation

SIR,— Department of Lands and Survey, Wellington, 2nd June, 1913.

During the past year over ten million trees were successfully raised in the four State nurseries, a little more than half being in the North Island nursery at Rotorua, whilst the remainder were grown in the three South Island nurseries. Over five million trees were sent out to the State plantations in the same period, and at the 31st March last there were estimated to be nineteen million tree-plants remaining in the nurseries available for planting out during the current and successive seasons. Since the formation of the nurseries in 1896 over sixty million trees have been sent to the plantations and three million trees to outside places, the total cost of the seven nurseries (three of which have now been closed) to date being £117,743, of which, however, £25,323 is represented by permanent works.

In the nine plantations in which operations are at present being carried on an area of 1,604 acres was planted during the year, making a total of 20,634 acres planted since 1896. The cost per acre planted during the year ranged from £3 to £6 15s. 8d. per acre, which is a reduction on former figures. The total expenditure, inclusive of the estimated value of prison labour, since 1896 amounts to £170,347, of which £26,517 was on permanent works such as formation, buildings, roads, and fencing.

In the North Island as well as in the South Island abnormal weather-conditions were experienced, as will be seen by a perusal of the detailed report of the Superintending Nurseryman. The employment of prison labour on planting operations has continued to be a success, the gross value of work performed by those employed during the year being estimated at £2,130, or, deducting cost of buildings and supervision, at £1,370, but averaging about £70 per man per annum since the establishment of the system, as work to the value of over £32,000 is estimated to have been performed since 1900.

The ravages of larvæ and beetles on the young larch still continue, but, owing to the precautions taken in the nursery, are much diminished, and it is hoped they may eventually be suppressed. The danger from fires is increasingly realized on the large plantations now established in the Waiotapu and Whakarewarewa district, but every care has been taken to avert the threatened danger, and the officer in charge is now organizing his forces to combat any unexpected outbreak, and has made several valuable suggestions to this end. It is, however, regretted that a spreading fire severely damaged the Puhipuhi *Eucalyptus* plantation.

In the South Island an unusually wet season was experienced, consequently no serious fire took place in any plantation.

In Central Otago the raising of seedlings was an unprecedented success. Prison labour to the value of £1,127 was expended during the year on planting operations, the work done by each prisoner averaging £74. At the Dusky Hill plantation a certain amount of damage was done by the incursion of red deer. The departmental arboretum, containing a collection of the world's timbers and tree-seeds, is steadily being increased, and has already proved very useful.

I personally visited most of the nurseries and plantations during the year, and satisfied myself that the operations were being conducted in an efficient and economical manner. The staff under the immediate direction of Messrs. R. G. Robinson (Superintending Nurseryman for South Island) and H. A. Goudie (Superintending Nurseryman for the North Island) has worked well and zealously, and has shown every desire to advance the interests of the State in its afforestation operations.

The Royal Commission set up during the year to investigate and report upon forestry matters visited and inspected several of the nurseries and plantations during February and March. Its report is being laid before Parliament as a separate paper, and its recommendations will no doubt largely affect the future working of the Forestry Branch of the Lands and Survey Department.

The reports of the Superintending Nurserymen are attached, together with detailed reports from the officers in charge of the individual nurseries and plantations, whilst the usual summaries of operations in the nurseries and plantations follow my remarks.

I have, &c.,
JOHN STRAUCHON,
Under-Secretary for Lands.

The Hon. W. F. Massey, Commissioner of State Forests.

SUMMARIES.

Summary of Operations in Nurseries during Year ended the 31st March, 1913.

Name of Nursery.	Total Expenditure.				Trees in Nurseries.				
	Supervision and Clerical.	Permanent Works.	Tree-growing.	Totals.	Estimated Trees raised during Year.	Average Cost per Thousand Seedlings.	Output of Trees.		Estimated Number in Nurseries at 31st March, 1913.
							Trees sent to Plantations during Year.	Trees sent to outside Places during Year.	
	£ s. d.	£ s. d.	£ s. d.	£ s. d.		£ s. d.			
Rotorua	315 0 0	338 10 5	3,629 16 1	4,283 6 6	5,660,675	0 6 8	3,048,600	406	9,731,925
Tapanui	297 12 0	315 1 2	1,607 10 6	2,220 3 8	2,122,100	0 2 5	1,100,220	5,570	4,069,590
Eweburn	202 0 0	56 7 4	823 10 9	1,081 18 1	1,435,750	0 1 9	608,250	7,360	2,364,850
Hanmer Springs	160 0 6	106 15 4	971 11 7	1,238 7 5	1,587,100	0 1 10	712,240	28,850	3,187,100
Totals	974 12 6	816 14 3	7,032 8 11	8,823 15 8	10,805,625	..	5,469,310	42,186	19,353,465

Summary of Operations in Nurseries from 1896 to 1913.

Name of Nursery.	Total Expenditure.				Estimated Number of Trees raised.	Cost per Thousand.	Output of Trees.	
	Supervision and Clerical.	Permanent Works.	Tree-growing.	Totals.			To Plantations.	To outside Places.
	£ s. d.	£ s. d.	£ s. d.	£ s. d.		£ s. d.		
Rotorua..	2,946 16 8	8,959 12 5	34,698 0 7	46,604 9 8	46,500,236	0 17 10	35,974,829	793,482
Ruatangata*	797 2 8	1,278 19 4	6,632 6 3	8,708 8 3	2,187,732	2 15 2	2,133,520	54,212
Tapanui	2,296 4 11	4,621 16 8	18,359 16 6	25,277 18 1	15,905,880	1 11 9	11,091,060	745,230
Eweburn	1,421 19 6	2,993 14 7	9,631 0 7	14,046 14 8	5,606,972	2 10 2	3,166,045	76,077
Hanmer Springs	1,055 1 10	2,707 9 6	7,017 2 10	10,779 14 2	9,760,975	1 2 1	6,463,025	110,850
Starborough*	423 13 3	2,756 17 3	6,075 16 7	9,256 7 1	3,059,610	3 0 6	1,965,095	1,094,515
Kurow*	205 0 0	2,004 18 5	860 4 2	3,070 2 7	172,460	..	..	172,460
Totals	9,145 18 10	25,323 8 2	83,274 7 6	117,743 14 6	83,193,865	..	60,793,574	3,046,826

* Nursery now closed.

SUMMARY OF OPERATIONS IN PLANTATIONS DURING YEAR ENDED 31ST MARCH, 1913.

Name of Plantation.	Trees.			Expenditure (including Estimated Value of Prison Labour).					New Area planted.	Cost per Thousand Trees planted.	Cost per Acre planted.	General Upkeep per Acre planted.
	Number received from Nursery.	Number used to replace Losses.	Number planted on New Area.	Supervision and Clerical.	Formation, Buildings, Roads, Fencing.	Planting Operations.	General Upkeep.	Totals.				
				£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	Acres.	£ s. d.	£ s. d.	£ s. d.
Whakarewarewa ..	1,236,350	557,775	678,575	664 4 6	400 13 11	1,204 2 0	1,997 11 3	4,266 11 8	299	2 19 9	6 15 8	0 7 4
Waiotapu	1,812,250	449,125	1,363,125	790 0 0	993 18 8	1,074 15 5	977 3 4	3,835 17 5	477	1 11 4	4 9 6	0 3 4
Puhipuhi	..	..	..	25 0 0	..	..	210 5 0	235 5 0	..	..	..	0 4 0
Conical Hills ..	1,088,720	58,085	1,030,635	260 0 0	89 0 8	1,489 15 10	1,136 19 3	2,975 15 9	379	1 8 10	3 18 7	0 8 6
Dusky Hill	11,500	11,500	..	180 0 0	30 1 8	..	136 9 2	346 10 10	..	..	..	0 3 3
Gimmerburn ..	..	..	..	5 0 0	..	..	..	5 0 0	..	..	..	..
Naseby	608,250	49,600	558,650	144 4 0	19 1 9	613 15 3	299 18 7	1,076 19 7	205	1 1 10	2 19 11	0 8 8
Hanmer Springs ..	712,240	52,825	664,415*	307 0 6	370 11 2	1,147 1 5	501 13 4	2,326 6 5	244	1 14 6	4 14 0	0 5 1
Dumgree	..	..	..	2 0 0	..	..	3 3 0	5 3 0	..	..	..	..
Totals ..	5,469,310	1,178,910	4,295,400	2,377 9 0	1,903 7 10	5,529 9 11	5,263 2 11	15,073 9 8	1,604	..	..	..

* Including 5,000 willow-cuttings.

SUMMARY OF OPERATIONS IN PLANTATIONS FROM 1896 TO 1913.

Name of Plantation.	Trees.				Expenditure (including Estimated Value of Prison Labour).					Total Area planted.	Cost per Thousand Trees planted.	Cost per Acre planted.	General Upkeep per Acre planted.
	Number received from Nursery.	Number raised from Seed sown *in situ*.	Number used to replace Losses.	Total Number in Plantation.	Supervision and Clerical.	Formation, Buildings, Roads, Fencing.	Planting Operations.	General Upkeep.	Totals.				
					£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	Acres.	£ s. d.	£ s. d.	£ s. d.
Whakarewarewa ..	15,309,469	109,725	2,732,168	12,687,026	3,727 3 4	5,121 16 5	22,288 3 7	9,673 8 10	40,810 12 2	5,749	2 3 11	4 16 9	1 16 8
Waiotapu	20,612,315	83,121	3,011,657	17,683,779	4,640 10 9	7,386 5 7	24,270 1 10	5,969 10 10	42,266 9 0	6,748	1 14 1	4 9 0	0 19 3
Puhipuhi	2,133,520	..	1,133,520	1,000,000	982 9 7	1,195 3 10	3,983 8 1	3,339 3 9	9,500 5 3	1,200	*	5 2 8	2 15 8
Conical Hills ..	8,471,603	..	745,256	7,726,347	2,168 9 4	2,109 19 10	13,212 17 7	6,257 5 4	23,748 12 1	2,838	3 1 5	8 7 4	2 4 1
Dusky Hill ..	2,990,537	..	809,700	2,180,837	1,679 4 2	1,181 13 5	7,426 17 4	2,897 13 1	13,185 8 0	845	6 10 1	15 12 0	3 8 6
Waitahuna ..	42,025	..	11,500	30,525	27 9 0	61 1 1	74 0 9	40 9 9	203 0 7	11	6 13 0	18 9 0	3 13 6
Gimmerburn ..	936,235	..	783,339	152,896	312 16 8	514 13 11	984 4 0	809 5 10	2,621 0 5	173	17 2 8	15 3 0	4 13 6
Naseby	2,102,035	..	245,676	1,856,359	641 3 2	1,004 9 9	3,142 5 6	1,644 12 10	6,432 11 3	691	3 9 4	9 6 2	2 7 7
Hanmer Springs ..	6,463,025	..	1,121,154	5,346,871	1,888 18 6	3,743 5 1	9,449 11 7	2,972 6 2	18,054 1 4	1,964	3 7 6	9 3 10	1 10 3
Dumgree	1,679,765	..	1,110,125	569,640	926 5 0	4,198 9 3	5,762 17 2	1,533 0 0	12,420 11 5	209	*	*	*
Raincliff	..	..	..	50,000	..	..	..	..	1,104 12 5	206	*	*	*
Totals ..	60,740,529	192,846	11,704,095	49,284,280	16,994 9 6	26,516 18 2	90,594 7 5	35,136 16 5	170,347 3 11	20,634	..	..	..

* Data not available.

REPORT ON THE AFFORESTATION OPERATIONS IN THE NORTH ISLAND, 1912–13.

[By the Superintending Nurseryman, Rotorua.]

In reviewing the results of the past season's work it is not possible to generalize because of the somewhat abnormal weather-conditions at certain periods of the year. The winter months were unusually severe, frost being recorded on eighty-one nights during the year, and in every month except March and December. November was a most trying month; strong drying winds were almost continuous, and in consequence all young growth suffered. From this month on to the end of March the weather was very dry, and except where the atmospheric conditions were modified by overhead shade the growth made by the trees is unusually small. In the plantations the death-rate is higher, and the growth made by the trees lower, than usual. Trees in the nursery made poorer growth, but the crop of seedlings is a plentiful one.

Prison Labour.

The following tables summarize the work done by prisoners at Whakarewarewa and Waiotapu Plantations:—

Year.	Waiotapu Plantation.			Whakarewarewa Plantation.		
	Average employed.	Total Value of Work.	Average per Man.	Average employed.	Total Value of Work.	Average per Man.
		£ s. d.	£ s. d.		£ s. d.	£ s. d.
1900–1	*20·00	170 0 0	8 10 0	..	..	..
1901–2	18·00	437 18 6	24 6 7	..	..	..
1902–3	22·59	904 12 11	40 0 11	..	..	..
1903–4	30·00	902 3 0	30 1 5	..	..	..
1904–5	43·00	1,562 0 0	36 6 0	†11·00	332 13 7	30 4 10
1905–6	42·56	2,440 8 5	57 6 9	14·19	771 8 4	54 7 3
1906–7	35·62	2,978 0 0	83 12 1	11·50	762 11 0	66 6 2
1907–8	38·64	3,878 7 6	100 7 5	15·05	1,103 5 2	73 6 1
1908–9	32·83	3,496 19 2	106 10 4	13·16	971 10 0	73 16 5
1909–10	27·81	3,164 19 2	113 16 0	10·89	789 7 6	72 10 10
1910–11	23·45	2,390 7 1	101 18 7	10·44	957 0 3	91 13 4
1911–12	17·04	1,750 5 0	102 14 3	11·16	934 19 9	83 15 7
1912–13	15·20	1,198 16 9	78 17 5	9·51	931 3 2	97 18 3
Totals ..	..	25,274 17 6	..	..	7,553 18 9	..
Averages ..	‡30·35	..	68 18 4	§12·21	..	70 13 3

* One month's work. † Nine months' work. ‡ 12·08 years. § 8·75 years.

Year.	Average Number employed.	Value of Work.	Deduct		Net Value of Prison Labour.	Value per Man per Day.
			Cost of Buildings.	Supervision.		
		Waiotapu Plantation.				
		£ s. d.	£ s. d.	£ s. d.	£ s. d.	s. d.
1912–13	15·20	1,198 16 9	519 13 0	70 0 0	609 3 8	2 7[illegible]
1900–13	30·35	25,274 17 6	2,360 13 1	70 0 0	22,844 4 5	4 0
		Whakarewarewa Plantation.				
1912–13	9·51	931 3 2	..	170 0 0	761 3 2	5 1
1905–13	12·21	7,553 18 9	763 0 0	696 14 8	6,094 4 1	3 8

The employment of prisoners upon afforestation-work has undoubtedly been a success, and it is to be regretted that the number of men thus employed has gradually declined, as shown by the above tables.

Insect Pests.

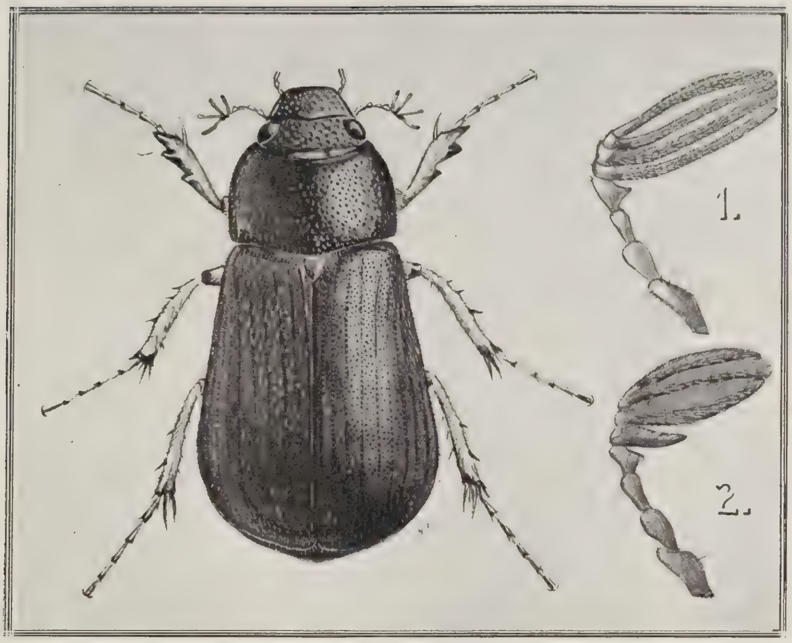
For some years past the seedling larch have been attacked by a native brown beetle, the larvæ of which feed upon the succulent roots of the plants. The destruction of trees caused by this pest was slight at first, but during the last two seasons it has been very severe. It was observed that the damage first commenced in the autumn, when the seedlings were about five months old. At this period the leaves of many of the plants become yellow, and upon investigation it is always found that such plants have been ring-barked just below the surface of the ground. In the spring the seedlings start away into growth, and to all outward appearance they give promise of doing well, but as the weather becomes dryer and warmer it is soon apparent that something is wrong; the leaves lose their healthy green appearance, many drop off, and the remaining ones are only about half the usual size. Plants can be pulled from the ground with the one finger and thumb, and it is found that all the soft roots have been eaten off, leaving only the bare tap-root and the stump ends of the secondary roots. Continued dry weather always results in the trees which are attacked dying out in patches. The beetles, which first make their appearance about the beginning of February, feed upon the leaves of the trees, but the damage done in this way is not as great in comparison as is that wrought by the larvæ upon the roots.

During the year much information has been gleaned about the life-history of this beetle, which has been fully described in the *Journal of Agriculture* of March, 1913, by Mr. A. H. Cockayne, Government Biologist, under the name of *Odontria puncticollis*. Several methods of control have been adopted, and from the knowledge thus acquired there appears no reason to fear any serious losses in the future. Spraying the trees with arsenate of lead and other insecticides at the period when the beetles were on the wing was not productive of any appreciable good results, and fires at night were similarly ineffective. There seems reason to believe that the wind has an influence upon the direction taken by the beetles on the wing in search of a suitable feeding and breeding ground, and in view of this the present year's crop of larch was sown as far as possible from the last year's crop, and in a direction at a right angle to the prevailing winds. This crop of larch has been protected, too, with a covering of thin hessian, and so far only one beetle has been found amongst the trees. The results of these precautionary measures are being eagerly awaited, and it is confidently expected that they will reduce the destruction of trees to a minimum. The losses amongst the two-year-old seedling larch amounted to about 400,000—the result of the damage by grubs combined with an unusually dry season. This insect seems to prefer larch before any other tree, but it has been got in considerable numbers in white-pine (*Pinus strobus*) and Douglas fir. Beds of Corsican pine and *Pinus ponderosa* growing alongside of infected larch-beds seem to be perfectly immune from attack.

Protecting the Plantations against Fire.

The dry period of the year, which usually commences about the beginning of November and continues to the end of April, necessitates definite measures being taken to protect the plantations from fire, and as it is desirable that the present system of protection should be extended, it is proposed to discuss at some length this important branch of forest-management. Hitherto the protective measures which have been adopted have consisted in the upkeep of fire-breaks, and in having at all times, during the dry season, an officer on duty to watch for outbreaks. Fortunately the damage done by fire to the plantations in the Rotorua district has been slight, but on several occasions this has been averted by only a hair's breadth, and it is upon such occasions that the shortcomings of the present system are realized. It must, however, be borne in mind that in the early stages of the work here it would have been unprofitable to have inaugurated an elaborate system of protection. The fire-breaks and the system of watching were then sufficient, but the area under plantation has gradually increased, until at the present time 5,748 acres are planted at Whakarewarewa, and 6,747 acres at Waiotapu, thus making it justifiable to increase the protective measures to some extent. It has been the rule to have all the internal fire-breaks 1½ chains wide, and in laying them off a ploughable course has been followed as far as was possible or desirable. On the boundaries, half a chain has mostly been left unplanted inside the fence; but where the line passes over heavy bracken country, or on the slopes of a hill, the width has been increased to three-quarters of a chain and sometimes to 1 chain. Owing to the broken nature of the country it has not been possible to adopt any regular size for each block, but it is now the rule to try and make 300 acres the minimum and 600 acres the maximum area. Road reserves and tracks are also left through the large blocks, and these would probably be of assistance in stopping the spread of fire. The outside boundary fire-breaks are kept cultivated, and never allowed to have sufficient growth upon them to carry a fire from outside into the plantations. Where these adjoin a public road they are made more effective by periodically burning off the growth upon the roadside. All fire-breaks which, owing to the rough or steep nature of the land, are unploughable are kept bare by burning. The continuous expense of ploughing an increasing area of fire-breaks led to an experiment being made three years ago of sowing them in grass and grazing them. This system is satisfactory, provided the grass is regularly eaten off, but neglect to do so might prove disastrous in case of a ground fire. It can be recommended only for the internal fire-breaks, because the danger from fire from without makes it expedient to keep the boundary ones cultivated. There are many sources from which fires may originate, but the most frequent one is the burning-off by occupiers of land adjacent to the plantation reserves. Very few settlers will go to the trouble to take measures to prevent the fire extending beyond their own boundary, and they usually regard the burning-off of the bracken country as a desirable thing, forgetting that a fire once started in such country may travel miles, and probably do considerable damage before it is extinguished. The fire which caused so much concern for the safety of the Whakarewarewa Plantation last December was, as far as can be ascertained, caused by a passenger on one of the coaches coming from Wairoa to Rotorua throwing down a burning match, cigar end, or something of a similar nature. Extensive areas of land covered with bracken and dwarf scrub growth adjoin all of the plantations. During the summer this growth is highly inflammable, and if once a fire is started it may last for a long time and burn over thousands of acres. Much depends upon the state of the wind as to how wide a fire-break a fire will carry over. Sparks will often carry fire for a distance of 10 or more chains. Hot cinders may be blown across a much-used road, and unless they are arrested by a bank of earth, by fresh plough furrows, or a non-flammable hedge they will extend the fire in an inconceivably short time. At Puhipuhi Plantation the land throughout the reserve and adjoining country carries a heavy growth of bracken, and in addition is strewn with decaying logs and dead standing trees. Once a fire starts it is not long before a dead stump or log becomes ignited, and the sparks from this, assisted by the wind, will carry destruction forward by stages, igniting other logs, and these in turn carrying the fire still further forward.

The present system of fire-breaks is, on the whole, satisfactory, but as it entails an annual expenditure of 10d. for every acre planted it appears desirable to sow them in grass and graze them with sheep in order to reduce this annual charge. Placing the grazing-value at £1 per acre per annum, the cost of sowing down at £3 per acre, and the permanency of the pasture at eight years, profit at the rate of about 7½ per cent. on the outlay would be reaped. Supposing, however, the grazing returned no profit, but simply paid expenses, it would still be a paying proposition, because the cost of ploughing, &c., at 10d. per acre per annum is, when reckoned at



ODONTRIA PUNCTICOLLIS, MAGNIFIED FIVE TIMES.

1, Antennæ of male, magnified thirty-five times; 2, antennæ of female, magnified thirty-five times.

The following is Major Broun's description of *Odontria puncticollis*:—

GROUP MELOLONTHIDÆ.

ODONTRIA, White, Man. N.Z. Coleopt., p. 265.

Odontria puncticollis, sp. nov.

Subovate, broadest near the hind thighs, moderately convex, somewhat nitid; head and thorax reddish-chestnut, elytra and legs rather paler, the latter often testaceous; sparingly covered with distinct, decumbent, moderately short, yellowish hairs, but also with longer erect ones along the sides, the base of elytra thickly clothed, in the middle, with elongate pubescence.

Head coarsely and moderately closely punctured, except at its extreme base, the forehead with reflexed, well-developed margins, broadly rounded in front, upper surface nearly nude. *Eyes* large, only slightly convex, hyaline. *Thorax* almost twice as broad as long, its sides finely margined, nearly straight, and only slightly narrowed behind the middle, gently curvedly narrowed towards the front; anterior angles acute, the posterior somewhat rounded; base widely sinuate towards the sides, rounded in the middle, the apex widely emarginate; its surface very distinctly, moderately closely and evenly punctured, frequently with a smooth linear space along the middle. *Scutellum* punctate, cordate or suboblong. *Elytra* thrice the length of the thorax, of the same width as it is at the base, gradually dilated posteriorly, the apices rounded at the sides, much less so, sometimes subtruncate, towards the suture; on each elytron there are nine fine striæ, the outer ones indistinct, the central ones obsolete near the shoulder; interstices plane, their punctation distinct, slightly finer that that of the thorax. *Pygidium* broad, with distant subgranular sculpture.

Under-side more or less finely punctate, fusco-testaceous, the abdomen a little shining and often fuscous in mature individuals; the sternum with numerous elongate, slender, fulvescent setæ, those on the femora erect.

Male.—Antennæ rather short, basal joint elongate, oblique and thickened at the extremity, the second as stout but only half as long, third more slender, fourth stout, angulate, and generally slightly produced in front; club minutely and densely pubescent, composed of four nearly equal leaflets.

Female.—Fifth antennal joint short, usually somewhat prolonged in front, but only a third, or less, of the length of the club, which is triarticulate and shorter than that of the male.

Length, 12–14; breadth, 7–8 mm.

This species can be distinguished from almost all the others by the very distinct, though not coarse, thoracic punctation, which is quite perceptible to the unaided eye, whereas in many other cases the punctures, either very fine or obsolete, can only be detected by means of a powerful lens. As a further aid to identification, it may be stated that, with the exception of White's *Rhizotrogus zealandicus*, 474, and one or two others, the surface is opaque and often maculate, and the elytra in some instances broadly sulcate. In the more closely allied, but larger, much paler, and rather more glossy, *O. nitidula*, 3233, the hind angles of the thorax, though obtuse, are more rectangular, and only those striæ that are near the suture are well marked.

Specimens collected by H. A. Goudie, in larch nursery-beds, Whakarewarewa, 6th February, 1913. The illustration is drawn from nature by Mr. E. H. Atkinson.

[Extract from the *Journal of the Department of Agriculture*, 15th March, 1913.]

To face p. 6.]

compound interest over a rotation of, say, sixty years, a heavy charge upon the plantation (10d. per annum at 4½ per cent. amounts in sixty years to £12). If this system is adopted it would be necessary to purchase sheep because of the difficulty in letting the grazing rights at a season of the year when grass is plentiful, and when it would be dangerous to allow the fire-breaks to become overgrown. An incipient fire may be easily suppressed by one man, whereas with a delay of half an hour there may develop a conflagration against which an army of men are helpless. It is absolutely necessary that fires should be dealt with promptly, and to carry this into effect a responsible officer must, during dry weather, always be on the lookout for outbreaks. A few workmen should live upon the reserve so that no delay will occur in getting help should fire start on a Sunday or a holiday. There should also be means of getting the men quickly to the scene of the fire, and a supply of fire-fighting tools should always be kept handy. It is advisable that all workmen when fire-fighting should be clothed entirely in woollen garments. Cotton fabrics catch fire more readily than woollen ones, and allow more heat through. Water for drinking should be carried to the men. If this is neglected their tongues become swollen and they cannot endure the same amount of heat, nor can they continue to work for any long period. To sum up, the problem may be stated as follows:—

(1.) There are 12,495 acres of plantation in the Rotorua district, the outside boundary of which is about twenty-five miles in length. Owing to the hilly nature of the reserves it is impossible to see much of the boundary from any one point.

(2.) The forester in charge has numerous duties to attend to which make it impossible for him to constantly patrol the boundaries.

(3.) In the event of a fire occurring on a Sunday or on a holiday time is lost in getting workmen to extinguish it.

In view of the foregoing the following proposals for improving the protective measures are put forward:—

(1.) The appointment of officers, to be designated Rangers, and given similar authority, whose main duty would consist in patrolling the boundaries during the dry season and keeping a watch for incipient fires; they to be accommodated in cottages built in positions commanding a good view of the plantation, and connected by telephone with the forester's house. During the wet months of the year they could be employed in keeping the fences in order and other work of a similar nature, and generally deal with trespass.

(2.) The erection of living-quarters for, and the selection of, six or eight workmen at each station who would take it in turns to be on the place on Sundays or holidays.

(3.) The equipment of a strong vehicle having a tank for carrying water, and a hand-pump and suction-hose for filling same. Also bucket-pumps and tools for fire-fighting. This vehicle to have seating-accommodation for six or eight men.

(4.) The establishing of depots where water can easily be got.

(5.) The planting of belts of deciduous trees, such as poplars, around the more inflammable blocks of pines.

(6.) Amending the laws in regard to the lighting and spread of fire and trespass.

The main idea in regard to the vehicle above mentioned was got from "Forestry in New England," by Hawley and Hawes. In this work much information is given about the protective measures adopted in the Connecticut, Massachusetts, and other of the eastern States. A special forest fire-wagon, which is described, is equipped with chemical extinguishers, galvanized cans containing extra charges of water and chemicals, also tools, &c.

The laws in respect to lighting fires and allowing these to spread into a State forest reserve might with advantage be amended to make it a punishable offence to light fires on Crown land, or to allow a fire to spread on to Crown land. Apart from the damage that may possibly result should such a fire get into one of the plantations, it seems remarkable that no thought has apparently been given to the damage done to the soil by fire. It is a common thing to see a fire smouldering for months in partly drained swamps, with the result that the humus is destroyed. Many acres of cut-out forest have deteriorated by similar means, yet the fires continue, and if the origin of some of them were sought out it would probably be found that the individual who was responsible was quite unconcerned and ignorant of the damage he had been the means of accomplishing.

The law in respect to trespass upon Crown lands and State forests reserves is probably sufficient, but the regulation in which the months from November to March, inclusive, are especially prohibited is not applicable to the plantation reserves, where trespass at any time of the year is undesirable. In the foregoing proposals for increasing the measures of protection the framework only of the proposed system is given. It will probably be necessary to establish something in the nature of fire-fighting corps and conduct regular practice work. This will ensure the services of probably sufficient men to cope with an average outbreak. When fire has threatened the plantations in the Rotorua district any appeal for help made to the workmen or the local Maori population has been cheerfully responded to, and if this spirit is fostered the sympathy of these people will go a long way towards making a success of any general scheme which is adopted.

Proposals for 1913–14.

Some five million trees are available in Rotorua Nursery, and these will be planted during the year at the plantations in this district. It is hoped that the area under plantation will be increased by 1,500 acres during the year.

Conclusion.

The thanks of the Department are due to the Prisons Department for their co-operation in the tree-planting work. I have also to thank our own officers generally for their assiduity during a somewhat trying year.

H. A. Goudie,
Superintending Nurseryman, North Island.

Number and Species of Trees growing in the North Island.

Name of Trees.		Whaka-rewarewa Plantation.	Waiotapu Plantation.	Puhipuhi Plantation.	Totals.
Botanical Name.	Common Name.				
Acacia melanoxylon	Blackwood	123,174	1,296	..	124,470
Acer saccharum	Sugar-maple	..	..	..	..
,, pseudo-platanus	Sycamore	32,536	..	..	32,536
Aesculus hippocastanum	Horse-chestnut	...	..	..	..
Alnus glutinosa	Alder	26,393	..	..	26,393
Betula alba	Silver-birch	6,585	39,230	..	45,815
Castanea sativa	Sweet-chestnut	..	..	..	..
Catalpa speciosa	Hardy catalpa	..	..	..	..
Corylus avellana	Filbert	..	..	..	..
Cupressus Lawsoniana	Lawson's cypress	..	11,367	..	11,367
,, thurifera	Mexican cypress	420	400	..	820
Eucalyptus—species	Gums	2,103,767	72,000	981,500	3,157,267
Fraxinus americana	American ash	..	..	..	..
Hikora ovata	Hickory	..	..	..	..
Juglans cinerea	Butter-nut	..	..	..	..
,, nigra	Black-walnut	..	..	..	..
,, regia	Walnut	13,800	..	..	13,800
Juniperus virginiana	Red-cedar	670	..	..	670
Larix europaea	European larch	6,082,810	8,942,630	..	15,025,440
,, occidentalis	Western larch	50	..	..	50
Liquidambar styraciflua	Sweet-gum	1,700	..	..	1,700
Picea canadensis	White-spruce	..	..	..	..
,, excelsa	Norway spruce	195,025	..	..	195,025
,, grandis	Silver-fir (Cal.)	..	..	..	..
,, nobilis	Red-fir	..	..	..	..
,, pungens	Blue-spruce	..	..	..	..
,, sitchensis	Tideland spruce	91,175	..	..	91,175
Pinus austriaca	Austrian pine	283,655	1,108,025	..	1,391,680
,, Benthamiana	Bentham's pine	19,600	238,275	..	257,875
,, canariensis	Canary Island pine	6,300	..	..	6,300
,, contorta	Twisted pine	..	3,700	..	3,700
,, Coulterii	Coulter's pine	375	905	..	1,280
,, densiflora	Japanese red-pine	2,325	..	..	2,325
,, excelsa	Blue-pine	..	300	..	300
,, halepensis	Aleppo pine	..	..	..	..
,, Jeffreyii	Jeffrey's pine	2,200	6,643	..	8,843
,, Lambertiana	Sugar-pine	170	3,925	..	4,095
,, Laricio	Corsican pine	2,711,400	5,478,135	..	8,189,535
,, muricata	Bishop pine	6,320	43,800	18,500	68,620
,, Murrayana	Lodgepole pine	10,225	4,100	..	14,325
,, ponderosa	Heavy pine	505,650	1,153,700	..	1,659,350
,, ,, var. scopulorum	Rock-pine	575	1,475	..	2,050
,, radiata	Remarkable pine	147,800	248,875	..	396,675
,, resinosa	American red-pine	375	2,150	..	2,525
,, rigida	Pitch-pine	..	12,200	..	12,200
,, Sabiniana	Nut or grey pine	25	..	..	25
,, sylvestris	Scotch fir	..	200	..	200
,, strobus	Weymouth pine	..	159,950	..	159,950
,, teocote	American torch-pine	2,250	3,000	..	5,250
,, Thunbergii	Japanese black-pine	700	..	..	700
,, Torreyana	Torrey's pine	1,320	..	..	1,320
,, taeda	Torch-pine	1,100	..	..	1,100
Platanus orientalis	Oriental pine	1,900	..	..	1,900
Podocarpus dacryoides	White-pine (N.Z.)	..	..	..	..
,, totara	Totara	..	..	..	..
,, Hallii	,,	..	..	..	..
Populus (varieties)	Poplar	600	..	..	600
Pseudo-tsuga Douglasii	Douglas fir	209,583	89,712	..	299,295
Pyrus aucuparia	Mountain-ash	..	..	..	..
Quercus pedunculata	English oak	..	..	..	..
Robinia pseudo-acacia	Locust tree	..	..	..	..
Sequoia gigantea	Big tree (Cal,)	..	..	..	..
,, sempervirens	Redwood	90,673	..	..	90,673
Thuja plicata	White-cedar	3,275	14,200	..	17,475
Ornamental shrubs and leguminous plants	..	475	36,936	..	37,411
Totals	..	12,686,976	17,677,129	1,000,000	31,364,105

Rotorua.—Pinus Murrayana, Age Nine Years, Height 21 Feet.

Rotorua.—Pinus Jeffreyii, Age Nine Years, Height 9 Feet.

Rotorua.—Pseudo-tsuga Douglasii (Douglas Fir), Age Fourteen Years, Height 35 Feet.

Rotorua.—Picea sitchensis (Sitka Spruce), Age Fourteen Years. Height 21 Feet.

ROTORUA NURSERY.

(Area of enclosure, 163 acres; altitude (approximate), 1,000 ft.)

The rainfall for the twelve months ended 31st March amounted to 53·56 in., recorded on 161 days, the heaviest monthly fall being in September, when 8·02 in., falling on twenty-five days, was recorded. The maximum shade temperature for the year was 92° F. on the 30th December and the minimum 21° F. on the 5th August. Frost was recorded on sixty-nine nights. Generally, the weather throughout the year has been abnormal; the winter was unusually wet and cold, and the summer—from the beginning of December to the middle of March—hot and dry.

Seedling Trees.

The crop of trees, which number 5,660,675, and are detailed on Schedule V attached, are, on the whole, satisfactory, although the dry weather had the effect of retarding the growth until well into March. Heavy winds during November delayed the seed-sowing considerably, and the larch crop was fully a month later than usual in being sown.

Larch (Larix europaea).—From 4 cwt. of seed 2,500,000 trees were raised, germination being at the rate of about 8 per cent. The seedlings are a fine healthy lot, but the growth is not so good as usual, owing to the delay in sowing. From the same quantity of seed sown the previous year only half as many trees were raised.

Corsican Pine (Pinus Laricio).—2,000,000 trees were raised from 4 cwt. of seed, the rate of germination being unusually low—14 per cent These are a splendid lot of seedlings, and have made good growth since the dry weather ceased. They have been less affected by the dry weather than any of the other pines grown this year.

Heavy Pine (Pinus ponderosa).—The seed of this species germinated at the rate of 50 per cent., there being 500,000 trees raised from 100 lb. of seed. Owing to the dry weather the growth has been slow, and the leaves of the plants became pale and yellow in patches.

Weymouth Pine (Pinus strobus).—This is a very poor crop. From 20 lb. of seed 12,000 plants resulted, germination being at the rate of about 2 per cent.

Monterey Pine (Pinus radiata).—20,000 plants were got from 3 lb. of seed, germination being at the rate of 42 per cent. The growth of the seedlings has been slow, owing to the dry weather.

Douglas Fir (Pseudo-tsuga Douglasii).—From 40 lb. of seed 500,000 seedlings were produced, the rate of germination being 31 per cent. This is the most abundant crop of Douglas fir which has ever been raised here, the best previous rate of germination being 19 per cent. in 1911. The seedlings have felt the dry weather very much, and the growth has been rather poor.

Amongst the other small lots of seedlings mentioned in the schedule of one-year-old trees are several well-known valuable timber-trees.

The alder were grown for planting small areas of wet land. The crop is a very poor one as regards the germination, but the young plants have made excellent growth.

Sycamore is also a thin crop, but the plants are very vigorous. It is proposed to use these in planting up open places where the bracken has killed out the larch.

Picea excelsa and *Picea sitchensis*—the Norway and Sitka spruces—are to be used for underplanting larch; the latter-mentioned species is an excellent timber-tree, and has thriven well here when sheltered by more accommodating species.

Abies pectinata (the silver-fir of Europe) will be experimented with in a manner similar to that outlined for the spruce.

Cryptomeria japonica has been grown here to a small extent previously, and does well under certain conditions. The number raised this year will make it possible to put the value of this tree for afforestation purposes beyond a doubt.

Chamaecyparis Lawsoniana will be tried for underplanting larch. It does well where protected by other trees, but is susceptible to damage by unseasonable frosts.

Two-year-old Trees.

European Larch.—This crop has suffered very much from the depredations of the larvæ of the native brown beetle (*Odontria puncticollis*), and also to some extent by the strong drying winds which were prevalent in the spring. The crop is a disappointing one.

Japanese Larch (Larix leptolepsis).—Suffered greatly from the same cause as the European one, but the trees were transplanted into nursery rows, and made a quick recovery. The growth has been strong and healthy. This larch appears to be a better drought-resister than the common one, but on this point further investigations require to be made, because the opinion is expressed upon observations made from trees planted in different parts of the nursery and without actually testing the species side by side.

Corsican Pine.—Both the trees in the seed-beds and the lined-out ones have made splendid growth.

Heavy Pine (Pinus ponderosa).—The growth is satisfactory, but not as good as usual. Judging from the appearance of the seedlings, this lot is one of the numerous types of heavy pine, and not the one which has been grown here for many years past. An endeavour will be made to ascertain which variety this is.

Weymouth Pine (Pinus strobus).—These were transferred from the seed-beds to nursery rows last spring, because the larvæ of the brown beetle was destroying them. Owing to the damaged condition of the roots, about 50 per cent. of the plants succumbed, and those which survived made very poor progress.

Pinus montezumae and *Pinus patula*, both Mexican species, have made very quick growth. The former makes a very strong tap-root, and will probably be difficult to transplant successfully.

Lining-out Trees.

This work was completed early in September, the labour-cost being 2s. 6d. per thousand averaged over the 1,200,000 trees dealt with. The number of deaths caused by transplanting is lower than usual, which is probably due to the wet weather which followed in September and October. During the early part of December strong drying winds were prevalent, and caused a lot of damage to the larch crop; sandy soil was driven against the young plants, with the result that most of the foliage was stripped off them. From this setback they never recovered, because of the hot dry weather, which was prevalent until the end of February.

Manuring.—All the nursery which was unoccupied by crops of trees was given a dressing of carbonate of lime. The bulk of such land was sown down with ryecorn as a green-manuring crop, which was ploughed in and followed by a crop of rape. Rye has the advantage of being a very hardy plant, and therefore is admirably adapted for spring sowing here. It throws considerably more leaves than oats, but still as a green-manuring crop it leaves much to be desired. Small experimental plots were sown with other seeds, with varying results. Soja beans were not a great success, and are apparently not quite hardy enough; cow-peas made good growth, but the seed germinated badly. This would probably be a valuable crop for the purpose if good seed could be procured. Mustard ran to flower very quickly without throwing much leaf. Red clover made splendid growth, and but that it was very slow in starting, would be an excellent crop. Prairie-grass made good quick growth, but is too prone to run to flower. Rape throws a lot of leafage, and is very suitable.

As usual, artificial manures were largely used with the crops of trees.

General.—The output of trees during the year was 3,049,006, and the total output since the nursery was started is 36,768,311. At the 31st March the stock of trees numbered 9,731,925 of which number 4,500,000 will be sent to the plantations during the coming winter.

The average daily number of workmen employed was 24·95.

Details of expenditure and other tabulated information are appended hereto.

Following is a record of rainfall and temperature for the year:—

Schedule I.

Month.	Rainfall.	Number of Days Rain fell.	Temperature.		Number of Days Frosts occurred.
			Maximum.	Minimum.	
1912.	In.		Deg. F.	Deg. F.	
April	5·56	22	72	33	..
May	3·56	9	69	26	11
June	6·11	18	63	27	11
July	6·86	11	63	23	18
August	5·35	12	62	21	23
September	8·02	25	65	33	..
October	5·23	16	74	30	4
November	3·03	14	78	32	1
December	0·75	6	92	31·5	1
1913.					
January	4·75	11	86	35	..
February	0·82	8	87	33	..
March	3·52	9	88	33	..
Totals	53·56	161	..	..	69

Schedule II.—Statement of Expenditure

	For Year.			To Date.		
	£	s.	d.	£	s.	d.
Tree-planting and maintenance—						
Tree-growing	2,519	2	0	24,830	19	9
General maintenance and repairs ...	419	3	7	3,938	0	7
Tree-seeds	293	16	8	2,699	7	8
Manures	85	5	2	1,006	15	3
Horse-feed	277	7	4	1,862	9	10
Miscellaneous works	35	1	4	360	7	6
Stock and material—Tools and implements	153	17	11	1,172	11	9
Permanent works—						
Buildings	7	0	0	2,782	12	0
Seed-frames	149	17	4	1,799	2	1
Nursery-formation	27	15	2	2,322	15	1
Fencing	...			221	12	8
Water-supply	...			660	18	10
Supervision and clerical—						
Proportion of Superintending Nurseryman's salary	75	0	0	...		
Proportion of Nurseryman's salary ...	200	0	0	2,946	16	8
Clerical assistance	40	0	0	...		
	£4,283	6	6	£46,604	9	8

Schedule III.—Trees Account.

	During the Year.				Since 1896 to Date.				Estimated Value, as Schedule V.		
	Number.	Cost of Growing, per Thousand.			Number.	Cost of Raising and Maintenance, per Thousand.					
		£	s.	d.		£	s.	d.	£	s.	d.
Trees grown	12,780,931	0	6	8	46 500,236	0	17	10	85,625	17	2
Trees sent out	3,049,006	..			36 768,311	..			73,456	9	2
Balance in stock					9,731,925	..			12,169	8	0
Value of land, improvements, and stock (Property Account)									6,478	14	0
Total value									18,648	2	0

Schedule IV.—Property Account.

	£	s.	d.
Land (160 acres): Crown land not charged to Forestry Account ..	...		
Buildings	1,749	9	9
Improvements	1,693	16	5
Fencing	125	3	9
Stores in hand	2,910	4	1
	£6,478	14	0

Schedule V.—Details of One-year-old Trees, sown 1912–13.

Name of Tree.	Number in Seed-beds.	Height, in Inches.	Amount of Seed sown.		Value per Thousand.			Total Value.			Remarks.
			Lb.	oz.	£	s.	d.	£	s.	d.	
Acer pseudo-platanus	10,000	15	22	0	0	10	0	5	0	0	Strong.
Alnus glutinosa	2,500	9	5	0	0	15	0	1	17	6	″
Abies pectinata	500	1	1	0	1	0	0	0	10	0	For trial.
Cryptomeria japonica	2,000	2	1	0	2	0	0	4	0	0	″
Chamaecyparis Lawsoniana ..	2,000	1	0	8	1	10	0	3	0	0	..
″ aurea ..	150	1	0	4	1	10	0	0	4	6	..
Eucalyptus Stuartiana	80,000	6	1	0	0	10	0	40	0	0	Strong.
″ Smithii	200	6	0	1	0	10	0	0	2	0	Experimental.
″ umbra	200	6	0	1	0	10	0	0	2	0	″
Larix europaea	2,500,000	1½	448	0	1	0	0	2,500	0	0	Good.
Picea excelsa	10,000	1	1	0	1	0	0	10	0	0	Experimental.
″ sitchensis	20,000	1	1	0	1	5	0	25	0	0	″
Pinus densiflora	800	3	0	4	1	0	0	0	16	0	″
″ Laricio	2,000,000	1	448	0	1	0	0	2,000	0	0	Good.
″ ponderosa	500,000	1	100	0	1	0	0	500	0	0	″
″ pinea	25	3	0	1	1	0	0	0	0	6	″
″ radiata	20,000	3	3	0	1	0	0	20	0	0	″
″ strobus	12,000	1	20	0	1	0	0	12	0	0	Poor.
″ Thunbergii	300	3	0	4	1	0	0	0	6	0	Good.
Pseudo-tsuga Douglasii	500,000	1	40	0	1	5	0	625	0	0	Very good.
Totals	5,660,675	..	..		..			5,747	18	6	

Details of Two-year-old Trees, sown 1911–12.

Name of Tree.	Number in Seed-beds.	Number in Nursery-lines.	Height, in Inches.	Value per Thousand.			Total Value.			Remarks.
				£	s.	d.	£	s.	d.	
Betula alba	..	1,500	12	2	5	0	3	7	6	Strong growth.
Larix europaea	500,000	200,000	12	1	5	0	625	0	0	Weak.
				2	5	0	450	0	0	
″ leptolepis	..	25,000	12	3	0	0	75	0	0	Strong and sturdy.
Pinus Laricio	2,000,000	..	5	1	5	0	2,500	0	0	″
	..	800,000	5	2	5	0	1,800	0	0	
″ montezumae	..	500	5	2	10	0	1	5	0	Very strong.
″ patula	..	1,000	6	2	10	0	2	10	0	″
″ ponderosa	400,000	..	4	1	5	0	500	0	0	Good.
″ strobus	..	30,000	3	2	5	0	67	10	0	Poor growth.
Totals	2,900,000	1,058,000	..	..			6,024	12	6	
	3,958,000									

Details of Three-year-old Trees, sown 1910–11.

Name of Tree.	Number in Nursery-lines.	Height, in Inches.	Value per Thousand.	Total Value.	Remarks.
			£ s. d.	£ s. d.	
Fraxinus americana	300	6	3 0 0	0 18 0	Fair.
" quadrangulata	300	4	3 0 0	0 18 0	"
Liquidambar styraciflua	1,000	12	3 0 0	3 0 0	"
Picea canadensis	400	3	3 5 0	1 6 0	"
Pinus austriaca	400	5	3 0 0	1 4 0	Good.
" Benthamiana	500	5	3 5 0	1 12 6	"
" densiflora	25	6	3 0 0	0 1 6	"
" Lambertiana	500	5	3 5 0	1 12 6	"
" Laricio	80,000	5	3 0 0	240 0 0	"
" Massoniana	50	5	3 0 0	0 3 0	"
" monticola	100	3	3 0 0	0 6 0	Fair.
" ponderosa	4,000	5	3 0 0	12 0 0	Good.
" resinosa	250	5	3 0 0	0 15 0	"
" teocote	25	6	3 0 0	0 1 6	Very good.
Pseudo-tsuga Douglasii	20,000	9	3 5 0	65 0 0	Good.
Sequoia sempervirens	1,000	6	8 0 0	8 0 0	"
Thuja occidentalis	1,000	3	3 10 0	3 10 0	Fair.
Tsuga canadensis	300	3	3 10 0	1 1 0	"
" Mertensiana	400	3	3 10 0	1 8 0	"
Native trees and shrubs	2,700	8	20 0 0	54 0 0	"
Totals	113,250	..	..	396 17 0	

Details of Trees transferred to Plantations, &c., 1912–13.

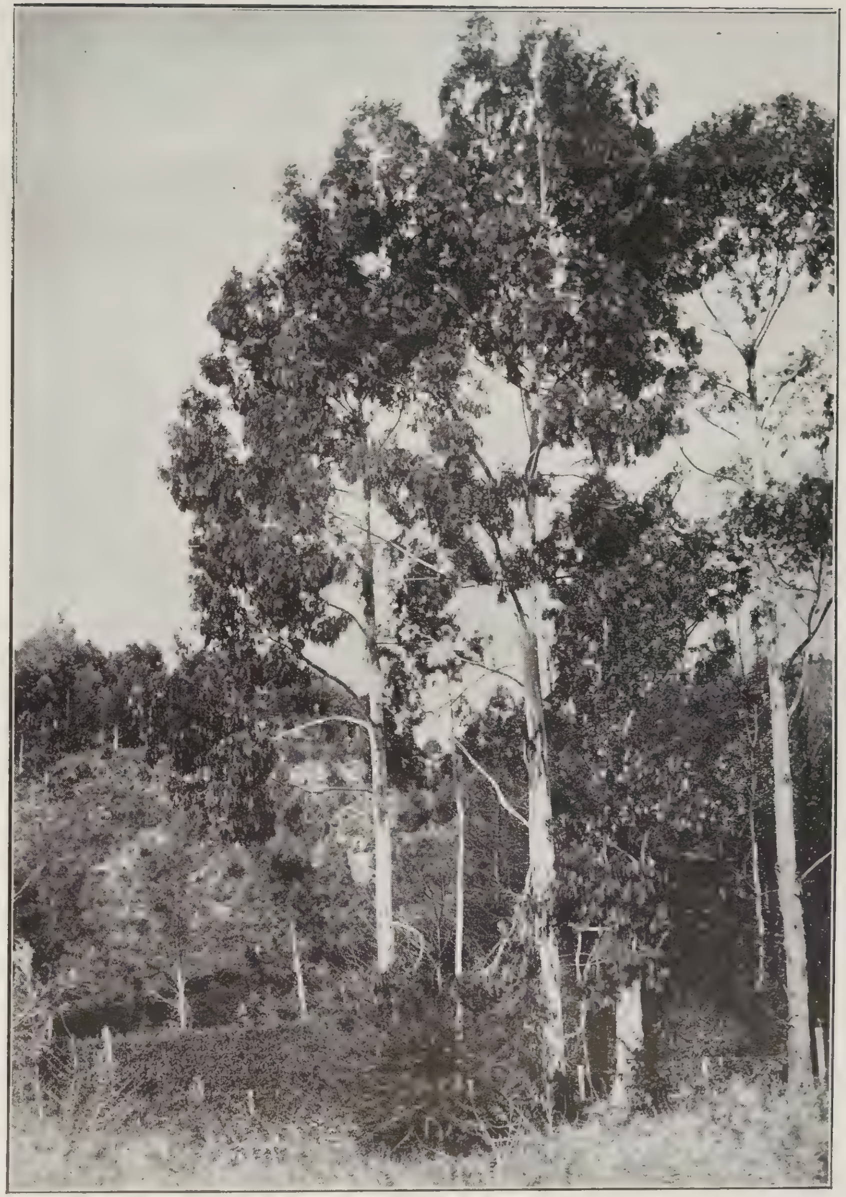
Where sent.	Name of Tree.	Number.	Height, in Inches	Value per Thousand.	Total Value.
				£ s. d.	£ s. d.
Whakarewarewa Plantation ..	Cupressus thurifera ..	150	9	3 0 0	0 9 0
	Eucalyptus Stuartiana ..	174,650	6	0 10 0	87 6 6
	Larix europaea ..	243,675	12	1 5 0	304 11 10
	Pinus Laricio	677,325	6	1 5 0	846 13 1
	" "	15,000	6	2 5 0	33 15 0
	" Massoniana ..	50	8	1 10 0	0 1 6
	" ponderosa ..	23,425	6	2 5 0	52 14 1
	" radiata	43,050	6	1 0 0	43 1 0
	" resinosa ..	325	6	3 0 0	0 19 6
	" teocote	275	8	3 0 0	0 16 6
	Pseudo-tsuga Douglasii ..	13,150	9	1 10 0	19 14 6
	" ..	45,125	12	2 10 0	112 16 3
	Sequoia sempervirens ..	150	8	8 0 0	1 4 0
		1,236,350	..	..	1,504 2 9
Waiotapu Plantation	Larix europaea ..	93,300	6	1 0 0	93 6 0
	" ..	553,650	12	1 5 0	692 1 3
	" ..	191,750	12	2 5 0	431 8 9
	Pinus austriaca ..	23,050	6	1 5 0	28 16 3
	" Benthamiana ..	10,100	6	1 10 0	15 3 0
	" Lambertiana ..	2,500	5	1 10 0	3 15 0
	" Laricio	680,700	6	1 5 0	850 17 6
	" "	1,000	6	2 5 0	2 5 0
	" ponderosa ..	56,075	6	1 5 0	70 1 10
	" " ..	17,375	6	2 5 0	39 1 10
	" radiata	182,575	6	1 0 0	182 11 6
	" strobus	175	5	2 5 0	0 7 10
Totals	..	1,812,250	..	..	2,409 15 9

Details of Trees transferred to Plantations, &c., 1912–13.

Where sent.	Name of Tree.	Number.	Value per Thousand.	Total Value.
			£ s. d.	£ s. d.
Whakarewarewa Plantation ..	As per details above	1,236,350	..	1,504 2 9
Waiotapu Plantation	"	1,812,250	..	2,409 15 9
Waikiekie School	Shelter-trees	75	..	0 7 6
Wanganui Education Board ..	Shelter-trees for Arbor-day planting	105	..	0 10 6
Native School, Waiotapu	Ditto	50	..	0 5 0
Matata Cemetery	Shelter-trees	36	..	0 3 7
Hauraki Plains Settlement ..	Trees for Public Domain	140	..	0 14 0
Totals	..	3,049,006	..	3,915 19 1

H. A. Goudie,
Superintending Nurseryman, North Island.

Rotorua.—Californian Redwood, Sweet Chestnut, and Douglas Fir, Age Thirteen Years, Height respectively 30 Feet, 25 Feet, and 27 Feet.



Rotorua.—Eucalyptus viminalis, Age Thirteen Years, Height 65 Feet.

Rotorua.—Plantation of Eucalyptus sieberiana, Age Thirteen Years, Height 45 Feet.

Larch Plantation at Waiotapu.

WHAKAREWAREWA PLANTATION.

(Area, 9,547 acres; altitude (approximate), 1,200 ft.)

A fair measure of success has attended the past season's operations, although the adverse climatic conditions experienced have resulted in the growth made by the majority of the trees throughout the plantation being slightly less vigorous than on an average year. During the spring and early summer months there was little warmth, and frequent frosts which assisted in keeping the ground cold; the result was that growth was sluggish, and the trees did not start away as freely as usual. As the season advanced an unusually protracted spell of dry weather set in, the small amount of rain which fell during a period of three months being barely sufficient to moisten the surface of the soil.

The effects of the dry weather were most noticeable amongst the larch, whose foliage became of an unhealthy colour, and resulted in a certain amount of premature leaf-shedding.

A particularly severe frost at the latter end of spring also checked the larch considerably, and on several small low-lying areas, where they had for several seasons been affected by late frosts, the trees were so severely damaged that there was no hope of recovery, and it was therefore decided to cut them out, and to prepare the ground for planting with pines during the autumn.

The dry weather has had little or no effect on the older pines, *Pinus Laricio, P. ponderosa,* and *P. Murrayana* in particular continuing to show their entire suitability to the district. On the whole, the trees planted during the past season have done remarkably well, the larch and Douglas fir having practically no failures amongst them, and with the exception that a few of the latter species are beginning to look sickly as the result of insufficient moisture, they are a very healthy lot. As usual, *Pinus Laricio* show the greatest percentage of failures, although the death-rate is a good deal lower than in the previous year; and although up to the present time they have made little headway, the weather is now very favourable for a vigorous autumn growth.

The comparatively small number of *Pinus Laricio* handled enabled the planting on new area to be completed during the autumn, and the young plants thus having the advantage of being partly established before the severe frosts set in no doubt contributed largely towards the success obtained.

Eucalyptus Stuartiana, which were planted during moist weather when the spring was well advanced, have also done better than in the previous year. In the experimental lots *Pinus resinosa* has done very well, but the same cannot be said of *Pinus Massoniana* and *Cupressus thurifera,* the former being almost a total failure, whilst amongst the latter there was fully 50 per cent. of deaths.

During the season trees to the number of 1,236,350 were received from the Rotorua Nursery. Of this number, 678,575 were planted in new area amounting to 299 acres, and the remainder —557,775—were used to replace failures in former years' plantings. The failures were principally amongst the *Pinus Laricio,* an extraordinary number of which were planted out during the previous season. Both free and prison labour were employed in planting operations, the former planting 88,625 on new area, and 408,450 to replace failures; while the prisoners planted 589,950 on new area, and 149,325 to replace failures. The number of trees now in the plantation is 12,686,551, occupying an area of 5,749 acres.

Prison Labour.—The daily average number of men employed was 9·51, and their work is valued at £931 3s. 2d., or an average per man of £97 18s. 2d., showing an increase of £14 2s. 7d. on the average earnings per man for the previous year. The work was performed in a very satisfactory manner, but the number of men available is generally insufficient, and varies so much that it is a difficult matter to lay out a season's work with any certainty of having it completed within a reasonable time.

Free Labour.—An average daily number of 19·25 men was employed, and the average cost of the various works undertaken was as follows: Clearing for tree-planting, £2 0s. 5d. per acre; pitting, 11s. 3½d. per thousand; planting, 6s. per thousand; and planting blanks, 17s. 1d. per thousand. 116 chains of fire-break were prepared for ploughing by clearing, stumping, and burning off, at a cost of 5s. 3d. per chain; and 83 chains of fencing were erected, at a cost of 4s. 2d. per chain.

The cost of clearing was considerably above that of the previous year, but the work was confined to some small areas of very steep rough land, on which the native growth was particularly heavy. On these blocks pitting was also more costly, but the greatest expense in this work was incurred in pitting the places where the frosted larch were cut out, and on which a dense growth of grass and small scrub had sprung up during the seven years which had elapsed since the areas were first planted. Owing to the risk of burning off this growth it was found preferable to chip it while preparing the pits.

Under the heading of "General Upkeep" the chief work included was the clearing of fern amongst the young trees, several of the blocks having to be gone over twice during the season. Considerable expense was also incurred in the planting of blanks and in the maintenance of fire-breaks.

Part of the oldest block of larch was cleared of all undergrowth, and the branches of the trees were trimmed up to a height of about 7 ft., and at the same time any completely suppressed trees which were either dead or dying were cut out. On any sufficiently open spaces which occurred the undergrowth was heaped and burned, the whole work of treating 30¼ acres costing, on an average, £3 14s. 6d. per acre.

This is a preliminary work connected with underplanting, and on the area prepared exhaustive trials of some of the best-known shade-enduring species of trees will be made.

A mixed block of Douglas fir and larch was gone through during the spring time, the growth being cleared around the former, and the branches of the larch trimmed up where necessary, in order to stimulate the growth of the Douglas fir by giving them the full enjoyment of light. A block of larch and redwood were also treated in the same manner.

In mixed blocks of these species this work is always necessary, as the larch grows so rapidly from the start that without assistance the other trees would be speedily suppressed.

During the first four years after planting the above-mentioned redwood made little or no growth, but with the shelter from frost and cold winds provided by the larch they have recently improved wonderfully, and judging from present appearances a great percentage of them will ultimately become fine trees.

During clearing operations any double leaders found amongst the redwood and Douglas fir were taken out. This was also done on part of a block of Corsican pine where severe frosts had destroyed the original leader, and caused the trees to throw up a number of shoots.

A new block of land of some 500 acres was fenced in, part of the materials of the old boundary-fence being used for this purpose, and part of it was also used in subdividing the horse-paddock. The total length of the fencing erected was 83 chains, costing 4s. 2d. per chain, including the carting of material, and the old fence, 220 chains in length, was dismantled and packed out to handy situations for carting, at a cost of 2s. 9d. per chain.

Little damage was done to the young trees by rabbits and hares, and beyond laying poison throughout the plantation no further work to keep down these pests was necessary.

No fires occurred in the plantation during the year, but a fire carelessly started during Christmas week on the Wairoa Road—which runs for several miles close to the boundary—caused a great deal of anxiety. For the greater part of a week men were required night and day to watch and check the fire, which on several occasions was carried by change of wind directly towards the plantation, and as all fern growth was exceedingly dry at the time the danger of sparks starting a fire amongst the trees was very great. Although the fire several times obtained a hold on the plantation side of the road it was successfully beaten out, and its progress was eventually stayed at the native bush at Tikitapu. The expenditure in wages in connection with the fire was £11 14s. 6d.

Work at which men could earn better wages has been plentiful in the district, and great difficulty has been experienced during the greater part of the year in getting suitable men for the plantation. As the work is in consequence all somewhat backward, and the scarcity of labour still continues, it is quite probable that some trouble in getting through the coming season's work may be experienced.

D. J. BUCHANAN,
Assistant Forester.

Schedule II.—Statement of Expenditure.

	For Year.			To Date.		
	£	s.	d.	£	s.	d.
Planting operations and maintenance—						
General utilization	...			68	17	7
Tree-planting	34	16	0	4,199	0	8
Pitting	80	6	0	5,418	4	9
Clearing	258	11	0	6,182	11	5
Cartage of trees	14	18	6	326	15	10
General upkeep of plantation ...	1,629	3	7	7,918	12	5
General repairs	107	16	8	506	0	5
Horse-feed	165	10	0	1,006	8	11
Permanent works—						
Fencing	49	13	0	1,127	14	10
Road-formation	...			368	15	2
General formation	204	19	6	701	8	10
Buildings	109	6	0	972	19	7
Water-service	...			95	5	6
Stock, implements, &c.—Tools and implements	16	3	9	636	14	2
Supervision and clerical—						
Supervision of free labour	419	4	6	3,727	3	4
,, prison labour ...	205	0	0			
Clerical assistance	40	0	0			
	£3,335	8	6	£33,256	13	5

Statement of Value of Prison Labour.

	For Year.			To Date.		
	£	s.	d.	£	s.	d.
Planting operations and maintenance—						
Tree-planting	221	4	10	1,779	13	1
Pitting	212	2	9	728	4	3
Clearing	84	10	0	1,641	14	8
General upkeep of plantation	368	7	8	1,754	16	5
General repairs	6	3	9	316	10	2
Miscellaneous work	1	18	9	97	18	1
Permanent works—						
Fencing	...			7	13	0
Formation	36	10	5	1,021	8	1
Buildings	0	5	0	206	1	0
	£931	3	2	£7,553	18	9

Average daily number of prisoners employed during year ... ... 9·51
,, ,, since camp started ... 12·21

Schedule III.—Trees Account.

	Number.
Trees received during year	1,236,350
Less to replace blanks	557,775
Planted on new area	678,575
Previously planted	12,008,451
Total number planted on 5,749 acres (average age, five years and a half)	12,687,026

Schedule IV.—Property Account.

	£	s.	d.
Land (9,580 acres): Crown land not charged to Forestry Account	...		
Buildings	919	2	5
Improvements	1,588	4	9
Fencing	756	1	6
Stores in hand	319	15	3
	£3,583	3	11

Balance-sheet.

	£	s.	d.
Total expenditure	40,810	12	2
Less Property Account	3,583	3	11
Cost of operations	£37,227	8	3
5,749 acres planted (average age, five years and a half).			
Estimated value of plantation per acre	£9	0	0

Schedule V.—Statement showing Cost of Operations.

	For Year. £	s.	d.	To Date. £.	s.	d.
Total expenditure	3,335	8	6	33,256	13	5
Deduct cost of buildings, fencing, &c. ...	380	2	3	3,902	18	1
	2,955	6	3	29,353	15	4
Add proportion total cost buildings, &c. ...	226	19	8	1,299	0	9
	3,182	5	11	30,652	16	1
Deduct cost of maintenance	1,737	0	3	8,424	15	10
Cost of planting 299 acres	£1,445	5	8			
Cost of planting 5,749 acres	...			£22,228	0	3
Average cost per acre for planting ...	£4	16	8	£3	17	4
Average cost per acre per annum for maintenance	0	6	0	0	2	0

Statement showing Cost of Operations (with Value of Work done by Prison Labour treated as an Expenditure).

	For Year. £	s.	d.	To Date. £	s.	.
Total expenditure	3,335	8	6	33,256	13	5
Prison labour, value of	931	3	2	7,553	18	9
	4,266	11	8	40,810	12	2
Deduct cost of buildings, fencing, &c. ...	416	17	8	4,138	0	2
	3,849	14	0	36,672	12	0
Add proportion of cost of buildings, &c. ...	288	15	11	1,637	5	11
	4,138	9	11	38,309	17	11
Deduct cost of maintenance	2,111	11	8	10,496	2	5
Cost of planting 299 acres	£2,026	18	3			
Cost of planting 5,749 acres	..			£27,813	15	6
Average cost per acre for planting ...	£6	15	8	£4	16	9
Average cost per acre per annum for maintenance	.0	7	4	0	2	6

Summary of Trees planted.

How used.	Number.
Number on plantation at present day—	
Contents of various blocks	12,686,551
Ornamental and shelter trees at prison camps, &c.	475
Total trees now living	12,687,026
Number used to replace failures, &c.—	
Experimental trees not suited to district	266,305
Used to replace failures	2,465,863
Total	15,419,194
Less trees raised from seed sown *in situ*	109,725
Trees received from nursery	15,309,469

Summary showing Area of Whakarewarewa Plantation (5,748·94 Acres in Trees).

How occupied.	Acres.
Larch	2,449·80
Pines	1,541·20
Blackwood	79·00
Eucalypti	1,534·30
Walnut	9·70
Spruce, *Picea*, *Pseudo-tsuga*	119·00
Birch	5·80
Alder	8·94
Poplar	1·20
Roads, tracks, and fire-breaks	450·85
Land unsuitable for planting, including swamps, creeks, horse-paddocks, residence reserves, water-main reserve	458·71
Unplanted land	2,922·30
	9,580·80

Summary of Trees growing on Whakarewarewa Plantation.

	Number.
Acacia melanoxylon	123,174
Acer pseudo-platanus	32,536
Alnus glutinosa	26,393
Betula alba	6,585
Cupressus thurifera	420
Eucalypti	2,103,767
Juglans regia	13,800
Juniperus virginiana	670
Larix europaea	6,082,810
,, occidentalis	50
Liquidambar styraciflua	1,700
Picea excelsa	195,025
,, sitchensis	91,175
Pinus austriaca	283,655
,, Benthamiana	19,600
,, canariensis	6,300
,, Coulterii	375
,, densiflora	2,325
,, Jeffreyii	2,200
,, Lambertiana	170
,, Laricio	2,711,400
,, Massoniana	50
,, muricata	6,320
,, Murrayana	10,225
,, ponderosa	505,650
,, ponderosa, var. scopulorum	575
,, radiata	147,800
,, resinosa	375
,, Sabiniana	25
,, teocote	2,250
,, Thunbergii	700
,, Torreyana	1,320
,, taeda	1,100
Platanus orientalis	1,900
Populus monilifera	600
Pseudo-tsuga Douglasii	209,583
Sequoia sempervirens	90,673
Thuja plicata	3,275
Total	12,686,551

D. J. BUCHANAN,
Assistant Forester.

Rotorua.—Pinus rigida, Age Nine Years, Height 12 Feet

Rotorua.—Pinus excelsa, Age Nine Years, Height 14 Feet.

Rotorua.—Seed-beds of Corsican Pine, with Larch and Eucalypti Plantation in Background.

Narrow Silver-birch Avenue leading to Hanmer Springs Nursery. Also serves as a Fire-barrier.

WAIOTAPU PLANTATION.

(Area, 7,777 acres; altitude (approximate), 1,200 ft. to 2,000 ft.)

Rain was registered on 150 days during the year, the total fall being 43·32 in. The maximum shade temperature of 89° F., recorded on the 30th December, was the highest reading at this station during the past five years. The minimum temperature was 18° F., on the 1st August. Frost occurred on eighty-one nights.

The month of September being exceptionally mild brought on splendid new growth, but unfortunately this was followed by severe late frosts which cut back some of the more tender species.

Trees to the number of 1,812,250 were received from the Rotorua Nursery. Of this total, 1,356,475 were planted out over a new area of 498 acres, 449,125 were used in replacing the deaths in previous years' plantings, and the remainder (6,650) were used for shelter-belts around the paddocks on the Kaingaroa Plains. As in former years, the bulk of the planting was done by prison labour, which accounted for 1,126,825 trees on new area and 266,075 in the replacing of deaths. Planting by free labour was mostly on outlying parts of the plantation, 229,650 trees being on new area and 183,050 in replacing failures. 2,760 poplar cuttings were planted, principally on land unsuitable to other trees.

Of the season's planting *Pinus radiata* seedlings were unable to withstand the severe winter frosts, and quite 50 per cent. will have to be replaced. Late frosts accounted for a good many losses in the Corsican pine, especially where this species had been planted on tussock country. With these exceptions, the remainder of the trees have made good headway, the tall seedling larch doing remarkably well. Taken right through, the season has been a good average one. The damage in the larger trees, due to late frosts, is confined to Douglas fir, and to small areas of larch planted on low-lying land, the trees being repeatedly cut back. Former plantings still continue to make strong healthy growth.

The formation of the new prison camp on the Kaingaroa Plains was completed in November last, and by the middle of January all the prison huts had been shifted on to the new site. It is now intended to work the area in the Waiotapu Valley with free labour, while the prison labour will be used on extension work on the Kaingaroa Plains.

The buildings formerly used by the Prisons Department as kitchen, dining-room, and store have been altered to provide accommodation for some of the men; this is greatly appreciated, as a cook can now be employed, and will probably be the means of the men stopping longer at the work than has been the rule in the past. Increased storage-room was obtained in the implement-shed by some slight alterations. At No. 1 camp the old raupo tool-shed was pulled down, and to replace it a wooden shed 20 ft. by 8 ft. was erected. All the necessary labour in connection with the building and alterations was carried out by one of the workmen employed on the plantation.

So far as can be ascertained, the plantation is practically free of disease. It is impossible at this stage to make a systematic examination of the different blocks, owing to the difficulty in moving about amongst the trees; and until the lower branches have been trimmed the amount of disease, if any, cannot be accurately stated, but so far as is possible the different blocks are kept under constant observation.

Boundary fire-breaks were widened an extra half-chain in several places by cutting and burning the manuka outside the fence, thus making an efficient fire-break for the present. 440 chains long by about 1 chain wide were reploughed, the remainder of the breaks being kept clear of all inflammable growth.

The horse-paddock near the No. 1 camp was thoroughly tile-drained, worked, and sown with a mixture of permanent grasses, resulting in an excellent sward. An easily drained swamp adjoins this paddock, and will be gradually brought under cultivation to enlarge the present paddock.

Rabbits and hares being on the increase, and doing a good deal of damage to the young trees, a man was constantly employed during the winter and spring months in trapping and poisoning, with good results.

The average daily number of men employed during the year was 10·02. A record of the rainfall and temperature for the year is attached.

J. MASON,
Assistant Forester.

KAINGAROA PLAINS.

(Area, 33,355 acres; altitude (approximate), 1,800 ft.)

The prisoners were transferred here from the Waiotapu Valley on the 15th November, since which time those men who were not required upon work in connection with the establishment of the camp have been employed clearing land and digging pits for tree-planting. It is expected that by the time the tree-planting season arrives 700,000 pits will have been dug, which number, added to those dug previously by free labour, will make about 2,000,000 available for tree-planting. The land which has been pitted is suitable for pines only, and it is intended to confine this year's planting to Corsican pine. Owing to the exposed nature of the plains generally, wherever possible the native vegetation is being left untouched, in order to provide shelter for the trees when they are planted. Unfortunately fires have gone over portions of it, and in such places only the hardiest trees will thrive. An experiment was made in sowing seeds of a number of trees in order to ascertain if there was any chance of stocking the land in this manner instead of planting. The seed was sown broadcast upon a strip of land which had been ploughed, left to fallow, and then harrowed. Birch, *Pinus radiata*, *Pinus ponderosa*, *Pinus Laricio*, Douglas fir, and *Eucalyptus Stuartiana* were all tried, but in each case the result was failure. The seed germinated badly, and any seedlings which came through soon succumbed, owing probably to the unfavourable climatic conditions. Further trials on a small scale will be made, but land on which there is a growth of fern or manuka will be chosen, because it is apparent that the seedlings must have protection from the sun and wind in their young state.

The establishment of the prison camp necessitated a considerable amount of labour in finishing the buildings and the water-service system, in laying drains, carting huts, &c. Most of this work was satisfactorily performed by prison labour. The water-supply has so far proved adequate and otherwise satisfactory. In addition to the supply from the spring, a concrete cistern, with a capacity of 14,000 gallons, was built to collect the rain-water off the roofs of the buildings, and this supply goes a long way towards satisfying the requirements of the camp.

An average daily number of 15·20 prisoners was employed throughout the year.

R. MacRae,
Assistant Forester.

Schedule I.

Month.	Rainfall.	Number of Days Rain fell.	Temperature.		Number of Days Frosts occurred.
			Maximum.	Minimum.	
1912.	In.		Deg. F.	Deg. F.	
April	3·92	18	68	32	1
May	2·48	7	68	20	15
June	5·88	18	60	21	10
July	4·66	12	62	20	16
August	3·59	9	61	18	23
September	5·61	26	62	37	..
October	4·91	15	71	25	8
November	2·14	13	75	24	4
December	0·50	4	89	36	..
1913.					
January	5·22	13	84	32	1
February	0·97	6	85	32	1
March	3·44	9	83	28	2
Totals	43·32	150	..	..	81

Schedule II.—Statement of Expenditure.

	For Year.			To Date.		
	£	s.	d.	£	s.	d.
Planting operations and maintenance—						
Tree-planting	61	3	1	706	19	3
Pitting	64	15	6	700	11	6
Clearing	33	8	3	694	4	9
Cartage of trees	25	5	6	606	10	8
General upkeep of plantation	523	19	2	2,064	10	2
General repairs	134	9	4	340	6	5
Horse-feed	189	13	0	1,019	6	9
Permanent works—						
Fencing	14	12	9	1,761	10	0
Formation	299	18	2	1,081	2	4
Buildings	242	10	11	2,087	6	4
Water-service	208	18	10	378	2	7
Stock, implements, &c.—Tools and implements	48	6	2	910	10	0
Supervision and clerical—						
Supervision of free labour	420	0	0	4,640	10	9
,, prison labour	290	0	0			
Clerical assistance	80	0	0			
	£2,637	0	8	£16,991	11	6

Statement of Value of Prison Labour.

	For Year.			To Date.		
	£	s.	d.	£	s.	d.
Planting operations and maintenance—						
Tree-planting	287	16	7	6,520	4	11
Pitting	139	15	0	6,857	2	4
Clearing	74	3	0	5,724	7	3
General upkeep of plantation	453	4	2	3,905	0	8
General repairs	13	5	0	180	0	0
Horse-feed	2	15	0	9	18	0
Permanent works—						
Fencing	1	12	6	400	15	2
Formation	48	14	0	482	14	0
Roadmaking	...			542	3	4
Buildings	85	16	0	554	3	4
Water-service	91	15	6	98	8	6
	£1,198	16	9	£25,274	17	6

Average daily number of prisoners employed during year	15·20
,, ,, since camp started ...	30·35

Schedule III.—Trees Account.

	Number.
Trees received during year	1,812,250
Less to replace blanks	449,125
Planted on new area	1,363,125
Previously planted	16,320,654
Total number planted on 6,747 acres (average age, five years)	17,683,779

Schedule IV.—Property Account.

	£	s.	d.
Land (41,132 acres): Crown land not charged to Forestry Account		..	
Buildings	2,142	8	2
Improvements	2,014	10	11
Fencing	1,287	10	8
Stores in hand	470	11	0
	£5,915	0	9

Balance-sheet.

	£	s.	d.
Total expenditure	42,266	9	0
Less Property Account	5,915	0	9
Cost of operations	£36,351	8	3
6,747 acres planted (average age, five years).			
Estimated value of plantation per acre	£8	16	0

Schedule V.—Statement showing Cost of Operations.

	For Year.			To Date.		
	£	s.	d.	£	s.	d.
Total expenditure	2,637	0	8	16,991	11	6
Deduct cost of buildings, fencing, &c. ..	814	6	10	6,218	11	3
	1,822	13	10	10,773	0	3
Add proportion total cost of buildings, &c.	356	8	1	1,868	19	7
	2,179	1	11	12,641	19	10
Deduct cost of maintenance	658	8	6	2,404	16	7
Cost of planting 477 acres	£1,520	13	5			
Cost of planting 6,748 acres ...		...		£10,237	3	3
Average cost per acre for planting ...	£3	3	9	£1	10	4
Average cost per acre per annum for maintenance	0	2	0	0	0	7

Statement showing Cost of Operations (with Value of Work done by Prison Labour treated as an Expenditure).

	For Year.			To Date.		
	£	s.	d.	£	s.	d.
Total expenditure	2,637	0	8	16,991	11	6
Value of prison labour	1,198	16	9	25,274	17	6
	3,835	17	5	42,266	9	0
Deduct cost of buildings, fencing, &c. ...	1,042	4	10	8,296	15	7
	2,793	12	7	33,969	13	5
Add proportion total cost of buildings, &c.	464	6	2	2,515	9	10
	3,257	18	9	36,485	3	3
Deduct cost of maintenance	1,124	17	8	6,489	17	3
Cost of planting 477 acres ..	£2,133	1	1			
Cost of planting 6,748 acres ...				£29,995	6	0
Average cost per acre for planting ...	£4	9	6	£4	9	0
Average cost per acre per annum for maintenance	0	3	4	0	1	6

Summary of Trees planted.

How used.	Number.
Number on plantation at present day—	
Contents of various blocks	17,627,338
On fire-breaks	11,367
Ornamental and shelter trees at prison camps, &c.	43,586
Experimental trees	1,488
Total trees now living	17,683,779
Number used to replace failures, &c.—	
Leguminous plants used as bait for rabbits and hares	1,425
Ornamental trees destroyed by rabbits and hares	16,000
Experimental trees not suitable for district	757,214
Used to replace deaths	2,237,018
	20,695,436
Less trees raised from seed sown *in situ*	83,121
Trees received from nursery	20,612,315

Summary showing Area of Waiotapu Plantation (6,747·70 Acres in Trees).

How occupied.	Acres.
Larch	3,255·45
Pines	3,299·80
Eucalypti	180·50
Birch	11·95
Roads, tracks, and fire-breaks	312·30
Land unsuitable for planting, including swamps, creeks, horse-paddocks, and residence reserves	260·25
Unplanted land	457·05
,, (Kaingaroa Reserve)	33,355·00
	41,132·30

Summary showing Number of Trees growing on Waiotapu Plantation.

Acacia melanoxylon	1,256
Betula alba	39,230
Cupressus thurifera	400
Eucalypti	72,000
Larix europaea	8,942,630
Pinus austriaca	1,108,025
,, contorta	3,000
,, Coulterii	475
,, excelsa	200
,, Jeffreyii	6,625
,, Lambertiana	3,925
,, Laricio	5,478,135
,, muricata	43,800
,, Murrayana	4,100
,, ponderosa	1,153,700
,, ponderosa, var. scopulorum	1,475
,, ponderosa, var. Benthamiana	238,275
,, radiata	248,875
,, resinosa	2,150
,, rigida	12,200
,, strobus	159,950
,, teocote	3,000
Pseudo-tsuga Douglassi	89,712
Thuja plicata	14,200
	17,627,338

H. A. Goudie,
Superintending Nurseryman, North Island.

Puhipuhi Plantation.

(Area (approximate), 1,200 acres; altitude, 1,000 ft.)

The rainfall for the year amounted to 39·13 in., falling on 145 days, the heaviest monthly fall being in July, when a fall of 9·95 in. was recorded. The greatest shade temperature was 90° F., recorded in March, and the minimum temperature was 31° F., in August. Frost occurred on four occasions.

The rainfall for this year is exceptionally low. Since 1906, when records were first kept, to the end of this year the average annual precipitation was 81·72 in. on 171 days. In 1907, 110 in. were recorded, which is the maximum fall in the period under review, and the lowest fall prior to this year was 71·45 in., in 1908.

The Puhipuhi State Forest Reserve consists of some 10,000 acres, which at one time was covered with a splendid kauri forest. Since this has disappeared the land has gradually become covered with bracken and dead logs, both fallen and standing, as is usual upon cut-out forest areas which have been burnt out. Practically nothing has been done by way of farming the land, owing probably to the fact that only short leases can be granted so long as it remains State forest reserve. It is true that a little grazing has been done, but this has simply been the using of the growth which usually comes after a fire without any attempt being made to grass the land in a proper manner. In its present condition this large area is a real menace to the plantation areas, and this fact was amply illustrated last January when a fire burnt over some 500 acres of *Eucalypti* plantations. The fire started on unoccupied land about a mile from a 100-acre block of *Eucalypti* which is detached from the main area planted. It spread with great rapidity, and before the caretaker could procure assistance the whole of this area had been burnt. The next difficulty was to keep it from spreading into the main area of plantation, but owing to the strong wind carrying sparks from burning stumps and logs it eventually broke out here, and soon swept over the best portion of the plantation. For some months prior to the outbreak no appreciable quantity of rain had fallen. The whole of the district was parched, the grass paddocks were as bare as a ploughed field, and consequently fire was readily spread by means of sparks. With regard to the damage done, this is not so great as might be supposed. The fire must have burnt very quickly, and, except where rotten logs or stumps became ignited, it did not last long. This conclusion is inferred from the fact that the foliage, which, of course, is scorched and lifeless, is still adhering to the trees, and that the topmost leaves on many of the trees of 14 ft. to 16 ft. in height are untouched by the fire. Since the fire most of the trees have made numerous shoots from the base of the trunk, and if the old wood is lopped off it will soon be replaced by a new stem. This work is now proceeding. Prior to the fire good growth was being made by *Eucalyptus resinifera*, but most of the other species of *Eucalyptus* planted were doing very indifferently.

The expenditure for the year amounted to £235 5s., which includes the wages of the caretaker and the employment of extra labour for fire-fighting.

The daily average number employed during the year was 2·11.

A record of the temperature and rainfall follows.

Schedule I.

Month.	Rainfall.	Number of Days Rain fell.	Temperature.		Number of Days Frosts occurred.
			Maximum.	Minimum.	
1912.	In.		Deg. F.	Deg. F.	
April	5·40	19	74	38	..
May	3·57	10	66	34	..
June	3·31	16	62	36	..
July	9·95	20	62	33	..
August	5·15	16	61	31	4
September	4·77	20	66	38	..
October	2·24	16	71	36	..
November	1·30	11	75	39	..
December	0·47	5	86	42	..
1913.					
January	1·64	3	89	42	..
February	0·27	3	86	42	..
March	1·06	6	90	40	..
Totals	39·13	145	..	..	4

Schedule II.—Statement of Expenditure.

	For Year.			To Date.		
	£	s.	d.	£	s.	d.
Planting operations and maintenance—						
Tree-planting	...			1,106	1	11
Pitting	...			1,552	14	0
Clearing	...			963	17	0
Cartage of trees	...			179	13	3
General upkeep of plantation	201	10	11	3,339	3	9
General repairs	4	6	5	142	18	0
Horse-feed	...			33	16	3
Permanent works—						
Fencing	...			471	0	3
Purchase of land	...			10	4	3
Formation	...			36	13	0
Buildings	...			355	4	9
Stock, implements, &c.—Tools and implements	4	7	8	326	9	3
Supervision and clerical—						
Supervision of free labour	15	0	0	982	9	7
Clerical assistance	10	0	0			
	£235	5	0	£9,500	5	3

H. A. Goudie,
Superintending Nurseryman, North Island.

REPORT ON AFFORESTATION OPERATIONS IN THE SOUTH ISLAND.

[By the Superintending Nurseryman, Tapanui.]

In adherence to the usual custom, I beg to make brief allusions to the special features of the year's forestry operations, details of which are given in local reports by officers in charge. A glance at the meteorological chart appended will convince one of the abnormally wet season we have just experienced; but, fortunately, this fact has not, on the whole, prevented the attainment of a very fair measure of success. Although at our Canterbury station the rainfall (50·73 in. on 139 days) was greatest, a precipitation of 43·45 in. occurred over an additional seventy-four days at Tapanui Nursery. At Central Otago the striking feature of the year's work is the unprecedented success in the raising of seedlings, whose rapid development points conclusively to the increased benefits arising from the combined natural application of water and earlier sowing. On 122 days the rainfall aggregated 22·67 in., which creates a greater fall than over any similar period during the fifteen years of weather observations at Ranfurly. Unfortunately, several late frosts were experienced at each station, injuring, more or less, the tender terminal shoots of the more sensitive trees; but generally the damage was not irreparable. Snowfalls were rare; but on one occasion at Hanmer Springs a stoppage of all operations for some weeks was brought about by an unusually heavy fall, which, although creating great discomfort, did not cause much damage to either seedlings or trees.

Nursery-work and Associated Expenditure.

The result of the season's tree-raising work in the three nurseries certainly supports the theory advanced by many persons that there is less likelihood of general failure arising in this phase of the work from various causes when trees are grown in several localities differing in climatic influences. An increased amount of moisture, for instance, in Central Otago is conducive to an improvement in results, whilst the heavy nature of the surface soil in the Tapanui district makes the growing of trees difficult in seasons (such as the past) when spring rains are not only heavy but persistent. Under the circumstances, the raising of some 5,144,950 seedlings (which is over a million in advance of last season's figures) may be looked upon as the outcome of careful management by the officers conducting the work. The actual cost of seed-sowing, covering with frames, scrimming, and other labour necessary during the first season amounted to £538 7s., which is a much better return than that shown in the previous reports. The development of these yearlings to the transference size, however, is generally so affected by the grubs, damping off, and other inherent pests that it is a wise policy to make provision for a 20-per-cent. death-rate when arranging for their transplantation. Each nursery is well stocked with trees ranging in ages from one to four years. The combined total, as shown in Schedule III, reaches 9,621,540, representing a value of £14,034 13s. 10d.; and omitting the records of the defunct Starborough Nursery, the average cost per thousand of growing the trees up to a sufficiently strong state for permanent planting, and bundling same in readiness for transportation, amounts to £1 8s. As by far the largest proportion of the output from the South Island nurseries are three-year-old trees, this rate of production is consistent with the best efforts recorded elsewhere, although we must always take into consideration the low rate of wages paid to employees engaged on similar work on the Continent when framing comparisons of results attained.

Since the year 1896 some 22,685,225 trees of various ages have been distributed from the four nurseries to State plantations, and, in addition, domains and public institutions have benefited similarly to the extent of 2,199,132, making a total output to date of 24,884,357.

Special Remarks concerning Principal Trees grown.

Although details of the development of trees at each plantation is presented in the following pages, a supplementary reference enlarging on the merits and demerits of certain trees may assist in substantiating facts that call for greater prominency. Since the initiation of the southern nurseries the energies of the Department have in great measure been directed upon the creation of *Larix europaea* plantations, nor have we until the past two years had any cause to regret specializing with this tree, of which some 6,591,299 are now growing in the eight State forests. Although in certain parts of Canterbury larch have always been regarded in an unfavourable light by arboriculturists, nevertheless the exceedingly rapid headway and healthy appearance until recently of the species tended to prove the wisdom of their inclusion in the varieties operated with even at Hanmer Springs, where, however, the altitude reaches 1,225 ft.

To the dryness experienced two years ago was attributed a mysterious discoloration of larch needles and on enlisting the services of Mr. A. H. Cockayne, Biologist to the Agricultural Departmtent, a diagnosis of the trouble revealed only climatic interference with the foliage. Realizing that pure larch forests are difficult to raise, owing to their sensitiveness to the contraction of disease, officers make frequent examinations for traces of fungus troubles. In conjunction with the Biologist, information is also being secured relative to the development of perithecia in the fallen needles, so that the determination of the presence of the previously suspected *Sphaerella laricina* will be possible at an early date. The question now arises, is it advisable to continue planting larch with the present uncertainty of success? Well-drained partially sheltered hillsides in a moist locality of about 1,000 ft. or more above sea-level are generally recognized as ideal conditions for larch-growing, and these conditions exist at most of our plantation areas.

On the other hand, a consistent progress is being maintained by both *Pinus Laricio* and *Pinus ponderosa*, probably two of the most valuable species of the genera now being operated with. Plant either of these pines in a fairly sheltered, warm position, and a growth of from 18 in. to 2 ft. annually might be expected; but the same healthy tone prevails, even if somewhat slower headway is made, if the most exposed or rocky situations are allocated to them. It is satisfactory to note that a total of 5,697,582 of the mentioned pines are now accounted for on the plantations, and the future extension of these blocks will receive the greatest attention of the Department. The commercial value of *Pinus radiata* timber for rough indoor purposes will not be lost sight of, although so far we have given preference to the yellow and Corsican species. In the fertile gullies *Fraxinus excelsior* and *Pseudo-tsuga taxifolia* are flourishing, and no more profitable trees could be introduced into such positions.

Much consideration was given to the growing of the various piceas at the beginning of forestry operations, probably on account of the simplicity in propagating and cheapness of the seed and a minimum loss in establishing the spruces on the plantation areas. For some years past, however, the Department has almost ignored the supplementing of the 1,267,825 *Picea excelsa*, *Picea sitchensis*, and *Picea alba* trees now in various stages, principally in the South Otago forests, and present indications pointing to only partial success, our early decision to discontinue planting any of the mentioned species may be regarded with favour. The spruces, however, behave most inconsistently, for while at Dusky Hill Plantation their height on the sidlings has only been increased by from 18 in. to 4 ft. in twelve years, a much greater vigour has been displayed by those occupying almost similar situations at Conical Hills in about half that time.

PLANTATION-WORK, AND ACQUIREMENT OF LAND.

Taking into consideration the adverse conditions under which we have had to labour, the output of 2,420,710 trees (as per Schedule V) may be regarded with approval. Of this number, 172,010 were utilized in replanting failures in previous plantings. The area under trees being augmented by 828 acres (against which an expenditure of £6,735 15s. 7d., including the value of prison labour performed, must be written) has now increased to 6,937 acres, containing 17,913,475 trees, as summarized in the associated table.

It will doubtless be pleasing to persons interested in the proposition of afforesting certain areas in Central Otago to learn that by establishing 608,250 trees at Naseby Plantation this season the total planted here over the past three years is advanced to a million and a half, which number greatly exceeds that similarly dealt with during the previous nine years of operations in the locality.

The comprehensive system of tabulating the cost of carrying on the various works prefacing these remarks will permit of instant comparison of one station with another, and the differences and annual fluctuations in costs may generally be attributed to the varying conditions under which the work is performed. For instance, the expense attached to the preliminary clearing, preparation of ground, and tree-planting at Hanmer Springs amounted to £1 14s. 6d., whereas the same operation was undertaken for £1 1s. 10d. at Naseby; but the very hard state of the surface at the former station prohibited good progress being made, and, in fact, contractors were loth to attempt the digging-work at times even at a greatly increased rate. It is satisfactory to refer to the general curtailment of expenditure in the item "General upkeep per acre," notwithstanding an almost equivalent amount of work being conducted. Tree-pruning, clearance of interfering vegetation, fire-break, and other maintenance works were carried on most economically at Dusky Hill and Hanmer Springs Plantations; but the fact of only a comparatively small number of trees requiring attention at the former station should not be overlooked.

The importance of almost immediately acquiring suitable ground for plantation-extension purposes is apparent. At neither of the chief stations is there a sufficient area to contain at the present rate more than two seasons' output of trees from the distributing nursery. In selecting future areas for tree-planting, not only should the altitude, character of soil, proximity to railway-communication, and rainfall statistics be considered, but the wind factor should also greatly influence the acquisition, as the retarding effect on tree-growth of strong prevailing south-westerly and north-westerly winds in certain districts, and particularly on the higher levels, makes the success in creating artificial plantations more problematical.

FIRE-PREVENTIVE MEASURES.

With an efficient protection against fires the problem of establishing forests becomes less difficult, and as more local experience is acquired annually, it is possible to effect improvements in this direction upon the more recent areas afforested. Although we might advantageously make greater use of the deciduous poplar and birch by increasing the width of the external fringe of these trees, and including strips on either side of the existing internal fire-lines, it is questionable if we could safely dispense with the custom of suppressing vegetation either near our boundary-lines or over the main areas now set apart as "fire-barriers." Two years ago it was resolved to include in future a few external lines of the partially fire-resisting poplars; but in this connection perhaps it would have been better, in view of the rapid depletion of the kahikatea forests and consequent necessity for substituting a suitable timber for converting into fruit and packing-cases, &c., to have decided upon the Canadian species (*Populus deltoides*) in place of the smaller-growing *Populus pyramidalis*, which, however, is recognized as an excellent shelter-tree throughout Central Otago. It is gratifying, however, to be able again to place on record the complete absence of any conflagration over our young forests. Perhaps in no previous year has less uneasiness been felt by responsible officers for the safeguarding of their plantations, and this fact must be ascribed to the moist conditions prevailing almost throughout that period when fires are most likely to occur. As referred to in the detailed report of Conical Hills Plantation, a grass fire was started near the planted reserve, and at one time became threatening; but after directing our full gang upon the outbreak, it was quickly subdued. Although generally varied experience is gained by employees in the mode of successfully extinguishing such surface fires as are necessary in the preliminary clearance of tussocks, fern, gorse, &c., the suggestion advanced by an enthusiast to have special periodical tests of fire-fighting by employees when convenient is worthy of adoption. The projected extension of our private telephonic system will also permit of the speedy assembling of the staff in any case of emergency.

An expenditure of £155 was devoted to the general cultivation of fire-lines, and in our endeavours to lessen this annual-recurring outlay an experiment was conducted with sheep that promises to fulfil expectations. We have entered into the practical results achieved by, and financial aspects of, grazing enclosed fire-lines with sheep; but before effecting any extreme alteration to the present system the further experiment of giving the animals free access to all parts of the more established plantations is desirable, and will likely be undertaken during the current season.

SELWYN PLANTATIONS, CANTERBURY.

In adherence to the planting scheme decided upon some two years ago by the Selwyn Plantation Board a fair amount of successful work was carried out under the supervision of Overseer McIlwraith. At Hororata some 26,650 trees—17,000 *Pinus Laricio*, 9,000 *Pinus ponderosa*, and 650 *Pinus radiata*—were utilized in extending the plantation; whilst at Chaney's, efforts were directed solely in creating a barrier to the body of drifting sand, which is steadily encroaching upon the adjoining property, and reducing the efficiency of the existing fences. Some 17,800 marram-grass plants were thus used to fix the sand particles, and 2,000 pines (700 *Pinus maritima*, 250 *Pinus muricata*, and 1,000 *Pinus radiata*) in effecting a seaward breakwind. The proposals for the coming year include the planting of some 100,000 *Pinus Laricio* and *Pinus ponderosa* at Hororata, for which purpose three trained planters have already been temporarily transferred from Conical Hills Plantation. Notwithstanding an unexpected curtailed output of trees this year, the Board's desire to receive State-grown trees at cost price has been acceded to, and the mentioned pines will be duly transported from the nurseries in Canterbury and South Otago.

ABANDONMENT OF PRISON LABOUR AT HANMER SPRINGS.

The decision of the Justice Department to discontinue the utilization of prison labour for tree-planting at Hanmer Springs is regrettable in many ways; but with the gradual extension of reclamation-work and the enlargement of reformative farms the early cessation of tree-planting in Canterbury by prison labour did not come as a surprise. In briefly reviewing the work accomplished, too much stress cannot be laid upon the cordial relations existing between the officers of the co-operating departments and the extreme interest displayed by the Justice Department and its representatives in carrying on the work so successfully. Although prison labour has played a very important part in the plantation-extension work here more than one-half of the operations must be credited to free labour. During the year work to the value of £1,127 0s. 10d. was performed by the prisoners, which increases the credit of the Justice Department to date to £6,381 4s. 8d., as per details hereunder:—

Estimated Value of Prison Labour.

	During the Year.			Since 1903 to date.		
	£	s.	d.	£	s.	d.
Planting 643,865 trees	334	14	5	2,510	18	10
Preparing 433,033 pits	362	5	6	1,930	3	4
Clearing 290 acres	290	19	5	887	10	0
General upkeep of plantation	41	16	0	410	0	9
General repairs	...			153	1	9
Horse-feed	5	1	3	15	10	0
Fencing	13	10	0	80	1	6
Formation	78	14	3	268	6	6
Buildings	...			125	12	0
Totals	£1,127	0	10	£6,381	4	8

It is gratifying to be able to state that by each prisoner accomplishing work to the value of £74 2s. 10d. during the year the individual efforts recorded in any past year have been exceeded, the average individual annual working value since the commencement of the camp being set down at £47 19s. 6d. Not being conversant with the running-expenses of the institution, it is not possible to furnish here the debit side of the question, to which, however, must be added the reformative value of the undertaking. After making due allowance for the maintenance of the camp and lost time through inclement weather, a daily average of some 15·22 prisoners were engaged at forestry work throughout the year, and this discloses a slight numerical strengthening of the camp since the initiation.

With regard to the continuation of the tree-planting work, the employment of an additional ten free workers, or by increasing the number of contractors from seven to seventeen, the present output of trees from the local nursery may be handled satisfactorily, although a small outlay in providing accommodation for workers must be reckoned upon.

DAMAGE BY RED DEER.

Very perceptible damage has been done to hundreds of our youthful trees during the past season by the red deer, which, having gained access by jumping into the enclosures, now habitually frequent the plantations. Although at Tapanui Nursery provision was made for the

ALDER (35 FEET) PLANTED IN SWAMPY GROUND AT HANMER SPRINGS IN 1903.

NORWAY SPRUCE PLANTED 8 FEET APART AT HORORATA PLANTATION, CANTERBURY.

A Fast-growing Plantation of Eucalyptus Stuartiana, near Darfield, Canterbury.

Oregon Pine and Norway Spruce growing under Ideal Conditions at Raincliff Plantation, Canterbury.

prevention of their ingress from the adjacent Blue Mountains by erecting special fences 6 ft. in height, this precaution was deemed unnecessary at other stations, where the ordinary 3 ft. 9 in. structures were provided. Should the animals persist in their destructive habits notwithstanding repeated stalking, our only safeguard will be in heightening the boundary-fences by the attachment of additional barb wires, and persevering with the shooting of the animals within the enclosure. The damage created by the red deer is confined chiefly to the ash and oak compartments at Dusky Hill, and in a smaller measure to larch at Hanmer Springs. The idea advanced by sportsmen that deer gradually acquire a taste for the foliage of certain species after previously ignoring such trees is borne out by the fact that a few years ago only trivial damage was reported; but now not only is the same foliage eaten readily, but leaders and laterals alike are chewed, and bark occasionally peeled. Undoubtedly the presence of stags gives greater cause for alarm, as they rub and strike their antlers against the trees at certain periods, necessitating the cutting-back to ground surface of certain deciduous trees. Needless to enlarge upon the volume of work inseparable from raising new "leaders," although at times we are compensated by being able to substitute perfectly straight boles for originally ill-formed ones. Officers in charge of the affected stations, although greatly handicapped by the density of the young plantations, were nevertheless successful in destroying four of the intruders during the year.

DESTRUCTIVE INFLUENCE OF GRASS-GRUBS ON NURSERIES.

It has been generally recognized that our greatest hindrance to successful tree-raising in the most southern nursery is the presence of the larvæ of *Odontria zealandica*, the beetles of which invade in large numbers the areas under young trees and green manurial crops. So far, by the application of certain combative measures, we have been able to greatly counteract the ill effects of the grub; but it is evident that more rigid preventive measures will require to be undertaken if the usual standard of success is to be maintained. The interest taken in the matter by Mr. A. H. Cockayne, Government Biologist, is commendable, and his valuable co-operation will surely lead to the determining of the local life-history of the insect and other information as will permit the formulating of practical control-methods. On forwarding a collection of beetles to the Biologist, it was ascertained that two species of *Odontria* were included —*O xanthosticta* and *O. zealandica*—so that the main flights of each species may not occur simultaneously. In the meantime all possible data is being collected, and present experiments with apterite, kainit, sulphate of copper, vapourite, permanganate of potash, and arsenate of lead will disclose to what extent these soil-fumigants and poisonous sprays may be put, in freeing the ground from the pest. Grass grows luxuriantly around the nursery enclosure, and it is certain that the beetles are attracted to our highly cultivated ground from the adjoining pastures. It is evident that although the seed-beds at the sowing period (October or November) may be comparatively free from the adult beetles or larvæ, the results from the main flight may prove quite disastrous to a seedling crop which in the earlier stages gave much promise of success. It would appear, then, that our efforts must be directed—Firstly, in blocking the ingress of the beetle to the seed-beds during the flying period; secondly, by spraying the surface with a chemical that will prove distasteful to the insect, and thus restrict its selection of the ground for egg-laying; thirdly, by inoculating the ground generally with a soil-fumigant of sufficient strength to make the situation uninhabitable to both the beetle and larva, whilst creating no interference to tree-growth.

EXPERIMENTAL AND EDUCATIONAL.

It is imperative for the successful control of any growing institution to provide facilities for conducting worthy experiments connected with the work, and, although the soundness of suggestions emanating from officers of the staff are, when time permits, fully inquired into, the vast amount of detail matters calling for personal attention forbids many experiments being given sufficient application or study.

Soil-fertilization.

Any new methods of restoring the fertility of the soil and replacing the required humus are carefully tested. For the second season an interesting development has taken place on the area relieved of *Fraxinus excelsior*. On lifting the two-year-old crop of English ash one is impressed with the woody nature of the tap and issuing fibrous roots. By carrying out the usual cultivation-work, and sowing the relieved area with carrot-seed, an exceedingly fine crop of carrots evenuated, whilst the yield from a specially prepared block adjoining did not compare at all favourably. The opinion previously formed that the hardwoods so speedily reduce the fertility of the soil that a temporary relief from either tree or root-growing is essential after every crop of ash-trees must now be discarded, although further tests in this direction will be carried out. We have hitherto refrained from using extensively leguminous crops for manurial purposes on account of the supposed refuge thus provided for grass-grubs, and have, as a substitute, kept the necessary areas in fallow, and applied bonedust and superphosphate. Consequent upon the two successive wet seasons, the growing and subsequent ploughing in of such crops as peas, crimson clover, cow-grass, and oats has been imperative, and it will be possible to accurately determine next year which, if any, of the mentioned cereals or grasses provides a breeding-haunt for *Odontria* beetles. The application of kainit at the rate of about 8 cwt. to the acre has been attended with much success, although the chloric salts not being absorbed by the soil for some time the dressing is applied with most advantage some months before the transplantation of seedlings begins. Kainit has also proved of immense value in imparting a quality to the soil obnoxious to the beetles and larvæ. Periodically those portions of our nursery-areas where the predominance of clay is apparent receive a dressing of agricultural lime; but it may be interesting to state that the results are more satisfactory if ground so treated is permitted to remain "rested" until the ensuing season, as pines rarely fail to show their aversion to the presence of newly spread lime in any form.

Arboretum.

The small areas available have perhaps been the cause of postponing from time to time the laying-off on approved principles of an aboretum at each nursery to demonstrate the growth of the various timbers operated with, and disclose the possible success of those which are now considered undesirable from a sylvicultural point of view. Arrangements are now well in hand, however, to carry this laudable idea into effect, and, as we already possess a somewhat varied collection of trees and shrubs at each station, their rearrangement, labelling, and supplementing will be a simple matter.

Under-planting at Dusky Hill Plantation.

The experiment of under-planting with *Thuja plicata* is being conducted in a very moderate way, but nevertheless of sufficient magnitude to disclose the possibilities of using the Pacific red-cedar for creating ground-cover. In our more advanced larch compartments the canopy is less complete than it was two or three years ago, and consequently the action of the penetrating sun on the floor of the young forest has influenced, here and there, the regrowth of vegetation. The time for thinning and under-planting is therefore quickly approaching, and the experimental labour in this direction during the ensuing two years will verify or disprove the methods recommended for supposed similar conditions by Continental writers. In perfect shade the young *Thuja* have made 6 in. of healthy growth, and give every indication of being useful for the purpose in view. It is interesting to note that both spruce fir and Oregon pine have already shown their growing inconsistency when allocated positions under the larch shade. Certain specimens are observed making excellent progress, whilst others again refuse to respond to the conditions; but, by keeping a watchful eye upon the future behaviour of these shade-enduring trees, it should be an easy matter to ascertain the cause of their irregularity under what was hitherto considered to be ideal surroundings. Embodied in this report is a photograph showing the nature of a flourishing specimen of *Pseudo-tsuga taxifolia* planted simultaneously with *Larix europaea* in a specially mixed stand. Notwithstanding the proximity (4 ft.) of surrounding larch and the general evenness of height-growth, strong lateral branches have issued from the evergreen almost throughout the length of the bole, demonstrating clearly the presence of too much light and insufficient density of planting for the creation of ideal Oregon pine forests.

Timber and Seed Specimens.

The collecting of the world's timbers is proceeding slowly. Included in the 370 specimens of woods secured (which, however, are by no means representative of any country) are samples from India, Malay, East Africa, Australia, &c., and although in the past the limited time at the disposal of officers forbade entering minutely into the studies of wood-structure, this phase is now receiving attention, and for such comparative purposes even the present collection of timbers is exceedingly useful. It has been possible to also greatly supplement the collection of tree-seeds for reference purposes, whilst the preserving of entomological specimens associated with tree-culture has not been overlooked.

Publication of Forestry Journal.

Each officer is steadily accumulating much valuable knowledge, which, by its diffusion amongst fellow-officers and the public generally, would prove both highly interesting and instructive. The inclusion of many experiences in the annual report of afforestation operations is perhaps undesirable, inasmuch as the salient features are apt to be overshadowed by lengthy articles, although excellent in themselves, having little bearing on the actual season's work accomplished. To my mind, the publication annually (or, if circumstances warranted, at less periods) of a small illustrated journal devoted purely to forestry matters from a scientific and practical aspect would undoubtedly stimulate the desire for further research generally, and it is more than likely that solicitations for articles on kindred subjects would be responded to readily by enthusiasts willing to place on record the results of their observations and experiments.

Experimenting with certain Trees.

Probably the trial sowing of *Pinus taeda* was the most interesting experiment conducted with newly introduced varieties to the southern stations, and the 8,000 healthy seedlings issuing from 2 lb. of seed will be ample to test the adaptability of this species of pine for high altitudes and the more rigorous conditions obtaining in Central Otago. A previous test of *Picea pinsapo* and *P. Nordmanniana* not eventuating satisfactorily, a further attempt to secure better results with these species ended in only a slightly increased germinating percentage. Some 3,000 *Pinus Banksiana*, *P. patula*, *P. Montezumae*, *P. Murrayana*, *P. picea*, and *P. sylvestris* have reached the two-year-old stage without disclosing any ill effects from local climatic conditions. In next report, however, more complete data on the youthful characteristics of each species will be available, and accordingly influence our future operations with these members of the pine genera.

DIVISIONAL PLANS.

In presenting explanatory plans of Conical Hills and Naseby Survey Plantations every effort has been made to combine accuracy with simplicity. The trial surveys have been carried out by the officers connected with each station, and the tabulation of statistics is sufficiently reliable for the basis of any future working-plan.

OUTLINE OF PROPOSALS FOR 1913–14.

Dusky Hill Plantation.—Only a small expenditure is anticipated here during the coming year. At the present stage but two employees are required to carry out the general maintenance work, which embraces the replanting of sycamore compartments with more suitable trees, removing larch slash, pruning, and other maintenance works.

Conical Hills Plantation.—Preparations are in hand for dealing with an approximate 800,000 trees at this station. Probably the whole area enclosed will also be pitted in readiness for planting in the following season. In consequence of vegetation assuming such a rank state, a greater outlay than usual will eventuate under the heading of "General Upkeep."

Waitahuna Plantation.—The suppression of rank gorse and broom on this experimental plantation is necessary, although no further replanting measures are advisable at the present stage.

Naseby Plantation.—Some 300,000 trees are now sufficiently advanced in the Ranfurly Nursery for permanent planting there. As the portion of the run originally resumed for afforestation purposes will be fully taxed with this number, the further resumption of land and an almost immediate start at enclosing the property would be beneficial.

Gimmerburn Plantation.—The labour here will include the producing of horse-feed for other South Island stations not possessing such adaptability for grain-growing; general pruning and fire-preventive measures will also occupy some little time of an employee who will be temporarily transferred from the district nursery.

Hanmer Springs Plantation.—By combining free and prison labour no difficulty should be experienced in utilizing about 750,000 trees in extending this young forest. In addition, some 100,000 pines (for Hororata Plantation) have been placed at the disposal of the Selwyn Plantation Board. The dismantling and subsequent re-erection of divisional fences is also included in the year's projected extension scheme.

GENERAL.

No changes have occurred in the official staff, to whom my best thanks for cordial and able assistance is due.

Special visits of inspection were made by the members of the Forestry Commission, and at a later date by Mr. J. Strauchon, Under-Secretary for Lands.

RAINFALL AND TEMPERATURE RECORDED AT THE SOUTH ISLAND STATE NURSERIES.

Year.	Tapanui Nursery.				Eweburn Nursery.				Hanmer Springs Nursery.			
	Rainfall.		Temperature.		Rainfall.		Temperature.		Rainfall.		Temperature.	
	Inches.	Days.	Max.	Min.	Inches.	Days.	Max.	Min.	Inches.	Days.	Max.	Min.
1898–99 ..	36·32	170	90	22	13·42	93	88	14	..	..	..	..
1899–1900 ..	37·49	169	98	14	19·21	83	87	5	..	..	..	..
1900–1 ..	35·21	150	92	19	18·76	90	91	10	..	..	..	..
1901–2 ..	36·09	144	94	16	17·04	82	86	9	..	..	..	..
1902–3 ..	48·32	173	96	22	19·58	85	78	16	..	..	..	..
1903–4 ..	42·15	127	94	16	19·00	73	90	8	..	..	..	..
1904–5 ..	40·60	141	92	24	15·68	87	86	6	..	..	..	..
1905–6 ..	43·95	119	90	21	17·41	113	81	14	62·18	164	91	13
1906–7 ..	30·37	134	88	21	13·38	94	89	6	34·71	117	94	18
1907–8 ..	25·91	127	92	24	13·93	95	96	15	48·44	116	98	18
1908–9 ..	39·92	157	88	24	21·78	111	84	2	44·77	151	83	17
1909–10 ..	31·67	141	95	21	13·98	86	95	11	43·74	139	90	20
1910–11 ..	28·29	159	90	25	15·61	92	84	10	44·68	110	85	20
1911–12 ..	38·53	201	90	22	16·26	122	93	15	51·38	131	94	17
1912–13 ..	43·45	213	87	22	22·67	122	84	11	50·73	139	90	15
Averages ..	37·21	155·0	..	..	17·18	95·2	..	..	47·58	134·6	..	..
	(Over period of 15 years).				(Over period of 15 years).				(Over period of 8 years).			

NUMBERS AND SPECIES OF TREES GROWING IN THE SOUTH ISLAND (31ST MARCH, 1913).

Name of Tree.	Dusky Hill Plantation.	Conical Hills Plantation.	Waitahuna Plantation.	Gimmerburn Plantation.	Survey Paddock Plantation.	Naseby Plantation.	Hanmer Springs Plantation.	Dumgree Plantation.	Raincliff Plantation.	Total.
Acer pseudo-platanus ..	105,000	164,671	400	..	..	..	400	..	..	270,471
,, saccharum.. ..	350	2,575	125	..	..	..	..	..	..	3,050
Aesculus hippocastanum ..	1,800	..	..	..	..	..	..	..	..	1,800
Alnus glutinosa	8,750	42,750	1,200	..	..	..	67,460	..	..	120,160
Betula alba	25,000	108,125	4,300	..	5,960	..	26,215	9,000	..	178,600
Castanea vesca	2,050	..	..	..	..	..	..	..	..	2,050
,, (*in situ*) ..	6,200	..	..	..	..	..	..	..	..	6,200
Catalpa speciosa ..	27	..	..	..	..	..	..	..	..	27
Corylus avellana ..	480	..	..	..	..	..	..	..	..	480
Cotoneaster Simmondsii ..	1,800	..	..	..	..	..	..	..	..	1,800
Cupressus Lawsoniana ..	..	..	..	..	..	..	300	..	..	300
,, macrocarpa ..	..	360	..	..	..	..	..	..	..	360
Cytisus laburnum ..	2,500	10,175	..	..	..	..	..	..	..	12,675
Fagus sylvatica	..	4,250	..	..	..	..	..	..	..	4,250
Fraxinus americana ..	7,800	4,025	..	..	..	..	..	..	..	11,825
,, excelsior ..	201,000	371,300	700	..	..	..	..	..	..	573,000
Grisellinia littoralis ..	2,100	..	..	..	..	..	..	..	..	2,100
Juglans regia	13,000	20,080	..	..	..	..	..	..	..	33,080
Larix europaea	470,000	3,090,300	10,010	34,905	16,000	187,254	2,577,830	205,000	..	6,591,299
,, leptolepis ..	2,600	..	..	..	..	..	..	..	..	2,600
Picea alba	1,350	..	..	..	..	..	..	..	..	1,350
,, excelsa	202,000	815,525	3,300	..	..	..	63,395	..	..	1,084,220
,, sitchensis	85,000	63,375	..	..	..	..	33,880	..	..	182,255
Pinus austriaca	275,000	453,125	3,200	112,821	232,514	30,360	786,295	105,000	..	1,998,315
,, Benthamiana ..	25,000	59,770	..	..	9,180	75,764	56,400	12,000	..	238,114
,, canariensis ..	..	..	..	..	..	..	..	200	..	200
,, contorta	..	..	..	..	..	..	1,000	330	..	1,330
,, halepensis ..	..	325	..	..	..	..	..	1,600	..	1,925
,, insignis	500	25,458	..	..	200	..	10,800	600	..	37,558
,, Jeffreyii	100	25	..	..	..	..	150	..	..	275
,, Laricio	380,000	1,719,188	1,800	..	40,000	965,055	1,192,720	160,000	..	4,458,763
,, maritima	9,800	1,250	..	..	..	..	..	..	..	11,050
,, muricata	3,200	12,050	1,500	..	..	..	35,200	11,000	..	62,950
,, ponderosa ..	40,000	474,475	750	..	74,020	195,037	432,540	22,000	..	1,238,822
,, rigida	..	825	..	..	..	..	..	800	..	1,625
,, strobus	1,200	5,125	40	..	..	..	..	6,000	..	12,365
,, Torreyana ..	200	..	..	..	..	..	..	110	..	310
Pittosporum tenuifolium ..	1,600	..	..	..	..	..	..	..	..	1,600
Populus (vars.)	6,000	14,700	..	..	..	10,027	250	..	..	30,977
Pseudo-tsuga taxifolia ..	56,000	87,325	2,500	..	100	..	56,750	16,000	..	218,675
Pyrus aucuparia ..	1,800	3,195	..	..	11,580	..	..	..	..	16,575
Quercus pedunculata ..	205,000	133,825	700	..	..	..	..	..	..	339,525
Quercus pedunculata (acorns *in situ*	30,000	..	..	..	..	..	..	..	..	30,000
Robinia pseudo-acacia ..	1,100	8,350	..	..	..	..	..	20,000	..	29,450
Salix (vars.)	1,600	4,675	..	5,170	..	3,308	5,000	..	..	19,753
Sequoia sempervirens ..	..	200	..	..	..	..	..	..	..	200
Sophora tetraptera ..	2,500	225	..	..	..	..	..	..	..	2,725
Thuja plicata	800	24,325	..	..	..	..	286	..	..	25,411
Ulmus campestris ..	630	..	..	..	..	..	..	..	..	630
Various trees and shrubs ..	..	400	..	..	..	..	..	..	50,000	50,400
Totals	2,180,837	7,726,347	30,525	152,896	389,554	1,466,805	5,346,871	569,640	50,000	17,913,475

R. G. ROBINSON,
Superintending Nurseryman, South Island.

TAPANUI NURSERY, OTAGO.

(Area, 132 acres; altitude, 500 ft.; established, 1897.)

It is questionable if local tree-raising operations have had to be conducted under more adverse conditions since the establishment of this nursery than during the past season, and following immediately upon an unusually sunless year it is only reasonable to anticipate in the attainment in tree-growing work generally a decreased measure of success.

The annual rainfall (43·45 in. occurring over 213 days) is the heaviest yearly precipitation since 1905, and undoubtedly the wet weather has been more persistent than in any previous recording year. In most localities a similar rainfall to that experienced here would be looked upon with approbation; but the argillaceous composition of the surface soil and substrata on this station forbids systematic tillage unless a fair proportion of sunshine and drying winds are distributed throughout the season.

Raising of Seedlings.—Special attention was directed upon the seed-bed area by manuring and frequent tillage, and during the last two weeks of October some 476 lb. of tree-seed—as shown on Schedule V—were operated with under fair conditions. To the subsequent coldness must be attributed the slowness in germination throughout, although gradually an even though somewhat thin crop of seedlings resulted. It will be noticed that some 2,122,100 yearlings were

General View of Seed-beds containing 2,228,000 Young Plants at Ranfurly Nursery.

"A Cultivated Fire-break at Naseby Plantation. Poplars will be planted on each side of Ploughed Land.

GENERAL VIEW OF YOUNG PINUS LARICIO AND PINUS PONDEROSA THRIVING AT NASEBY RESERVOIR PLANTATION.

SMALL RESERVOIR AT TAPANUI NURSERY.

raised; but should the destructive work of the grass-grub continue unchecked by the series of experiments now in progress, it is doubtful if anything like this number will be realized ere the transplanting stage is reached. From 116 lb. of *Pinus Laricio* seed some 840,000 young plants were raised, and although this result cannot be termed disappointing, it was evident on applying the usual testing that the seed did not come up to the usual standard. Both *Pinus ponderosa* and *Pinus Benthamiana* came through somewhat sparsely, but evidently to their advantage, as some 183,000 plants are now sturdy enough for removal to lines. Having in view the more extensive use of *Pinus radiata*, it is gratifying to find that some 100,000 pines of this species are now available for transplantation. Experience here shows that the Monterey pine may be raised with less trouble than any other tree being operated with. A trial sowing of 2 lb. of *Pinus taeda* disclosed not only the excellent germinative capacity of the seed, but the partiality of the plant for local conditions. The usual amount of success was attained with *Pinus muricata, Pinus maritima,* and *Pinus Torreyana.* Perhaps the most interesting feature of the season's tree-raising, however, is the fine germinating record of *Pseudo-tsuga taxifolia*, of which 230,000 plants eventuated from 20 lb. of seed—a 300-per-cent. increase on the average issue from the Oregon pine seed since initiation. Small sowings of *Picea pinsapo* and *Picea Nordmanniana* were not attended with pronounced success, although the number raised will permit the furtherance of experimental work with the species. Contrary to expectations, the grass-grubs have shown a distinct partiality for the youthful *Cupressus macrocarpa, Sequoia sempervirens,* and *Sequoia gigantea.* The young plants were fairly numerous in the beds until the advent of the pest, when almost a total clearance was effected in the course of a few days. The continuation of a series of tests with the gums was undertaken. Exceedingly fine results were attained two years ago, but a partial failure must be attributed this year to the raising of *Eucalyptus Stuartiana, E. Gunnii, E. crebra, E. coriacea, E. amygdalina,* and this fact will tend to discount opinions freely expressed locally that the eucalypti may be raised quite successfully under the conditions prevailing here. As might be expected during a season when grass-grubs are numerous, the *Larix europaea* seedlings, after giving promise of great success, provided nourishment for the pest, which has probably reduced our crop by 50 per cent.

Transplanting Trees.—Notwithstanding every effort being previously made to have the area for lining-out in a free state, the heavy and prolonged rainfalls absolutely forbade the undertaking of the transplanting work on the prepared ground, which is naturally of a very heavy nature, and quickly becomes sodden. It was thus necessary as a last resource to convert one of our most suitable adjoining horse-paddocks (where the soil is of a more friable composition) into a temporary nursery, and erect a scrub breakwind for partial protection to seedlings. Although the tree-growth amongst the 1,303,576 one- and two-year-old seedlings handled is much below the usual standard, the present position of affairs justifies the temporary abandonment of the old nursery area in favour of the drier horse-paddock. It is fortunate that the greatest measure of success is associated with the *Pinus Laricio*, which are fairly well rooted both in lines and seed-beds. The 80,000 *Pinus ponderosa* were chiefly one-year-old plants when transferred to lines, and have progressed so well that a large proportion are sufficiently robust for permanent planting. Both *Pinus radiata* and *Pinus muricata* have been disappointing, and, in fact, have not developed enough to merit their shifting to any exposed situation. Experimental work with *Pinus Banksiana, Pinus patula, Pinus picea, Pinus Montezumae, Pinus Murrayana,* and *Pinus sylvestris* was persevered with, and it will be possible next year to more accurately determine the prospects of each species as a suitable addition to our present list of satisfactory growers. Very fair headway has been made with the Japanese larch—*Larix leptolepis*—which is scarcely as rapid in growth, but is apparently as alluring to the grass-grub as the European species. Some 4,000 fine three-year-old Pacific red-cedar (*Thuja plicata*) have demonstrated their suitability to the district. Although this shade-enduring tree will probably be included in the list of varieties for underplanting, its tapering habit reduces its value commercially to such an extent that extensive plantations of this cedar are not aimed at by Continental foresters, nor is it likely to attain the prominence in New Zealand of such trees as Oregon pine, redwood, &c., for the mentioned purpose. Throughout the transplanting area several "breaks" of fairly well-developed *Cupressus Lawsoniana, Picea sitchensis,* and *Alnus glutinosa* are evident, but in each case it will only be possible to remove to plantations about 60 to 80 per cent. of the number growing.

Soil-restoration Measures.—Special provision was made during the year to restore soil-fertility to the areas which have been cropped annually with hardly sufficient intermission during the past fifteen years. The position became more acute when an increased output was aimed at, and, as our nursery-area was not proportionately extended, much perplexity has from time to time arisen in keeping apace with the requirements without causing direct injury to the surface soil. It is pleasing, however, to refer to the recent acquirement of an additional 12 acres of land, part of which will relieve any "breaks" in future when bordering on poverty through over-cultivation.

Crops of peas, oats, clover, and sainfoin were grown, and on reaching a height of from 2 ft. to 3 ft. were ploughed under for manurial purposes. In this district, where the grass-grub abounds, experiments extending over some years have revealed the ill effects of attempting to raise trees on areas relieved of a rye and clover crop of two years standing. Such areas on being ploughed usually receive a dressing of lime, and are permitted to remain in fallow for at least twelve months, during which time frequent tillage is resorted to.

The application over certain spare "breaks" of kainit at the rate of 8 cwt. per acre having been previously found beneficial as a soil-fertilizer and also distasteful to the larvæ of *Odontria zealandica*, some 4 tons have been used during the year, from which good results are expected.

Horse-feed and Live-stock.—Scarcely sufficient horse-feed for our stock was grown during the season, as by so doing the nursery-area would have been unduly taxed. Fortunately the associated pastures were in a better condition than formerly, and the consumption of chaff by our thirteen horses was accordingly curtailed. Some 5 tons of oaten sheaf and 10 tons of rye and clover were harvested under favourable conditions, and this quantity will be supplemented by produce specially grown for the southern stations at Gimmerburn Plantation. The number of live-stock was increased to fourteen head by the arrival of a filly of the desired stamp.

Miscellaneous Works.—An expenditure of £200 was incurred in the acquirement of the adjoining leasehold property of 12 acres, together with a small dwellinghouse and minor improvements.

To overcome the disadvantage arising from the presence of horses grazing amongst the native bush adjacent to the nursery about 40 chains of fencing was erected and gates hung at convenient positions. Several semi-decayed gates on the main boundaries were also replaced with those of a more durable character.

All buildings and implements received the usual annual overhaul, and are in excellent order throughout.

The annual expenditure amounted to £2,220 3s. 8d., providing employment to 10·9 men, and the total expenditure to date reaches £25,277 18s. 1d.

The year's output to plantations, public bodies, &c., is 1,105,790, which are valued at £3,325 0s. 11d. as per Schedule V, but in all probability this number will not be reached during the ensuing season.

Some 4,069,590 trees in various stages are now in stock, against which the value of £5,852 18s. 7d. has been shown.

Statement of expenditure, Property Account, Trees Account, and meteorological records are appended.

Schedule I.

Month.	Rainfall.	Number of Days Rain fell.	Temperature.		Number of Days Frosts occurred.
			Maximum.	Minimum.	
1912.	In.		Deg. Fahr.	Deg. Fahr.	
April	2·80	19	73	29	3
May	3·33	20	61	27	11
June	7·98	24	55	22	12
July	2·06	14	58	22	14
August	2·84	12	64	22	11
September	3·10	19	64	31	4
October	4·93	17	71	28	3
November	3·23	23	81	32	1
December	1·29	12	86	37	..
1913.					
January	3·11	19	85	33	..
February	3·60	16	87	33	..
March	5·18	18	81	30	1
Totals	43·45	213	..	..	60

Schedule II.—Statement of Expenditure.

	For Year.			To Date.		
	£	s.	d.	£	s.	d.
Tree-planting and maintenance—						
Tree-growing	887	0	0	12,666	15	11
General maintenance and repairs ...	402	15	2	2,680	1	2
Tree-seeds	138	1	11	1,205	0	7
Manures	23	19	9	245	8	1
Horse-feed, purchased and grown ...	94	0	2	1,279	17	11
Miscellaneous works	61	13	6	282	12	10
Stock and material—Tools and implements	23	13	11	1,005	13	11
Permanent works—						
Buildings	272	4	0	2,271	7	4
Nursery-formation	5	5	6	502	10	3
Fencing	13	8	9	617	10	8
Water-supply	0	9	0	224	14	6
Supervision and clerical—						
Proportion of Superintending Nurseryman's salary	125	0	0	1,885	14	11
Proportion of Nursery Foreman's salary	67	12	0	67	12	0
Clerical assistance	105	0	0	342	18	0
	2,220	3	8	£25,277	18	1

Schedule III.—Trees Account.

	During the Year.				Since 1896 to Date.				Estimated Value, as Schedule V.		
	Number.	Cost of Raising.			Number.	Cost of Raising and Maintenance.					
		£	s.	d.		£	s.	d.	£	s.	d.
Trees raised	2,122,100	254	10	0	15,905,880	25,277	18	1	..		
Trees sent out	1,105,290	..			11,836,290	..			..		
Balance in stock					4,069,590	..			5,852	18	7
Value of land, improvements, and stock (Property Account)						..			4,582	7	1
Total value									10,435	5	8

Schedule IV.—Property Account.

	£	s.	d.
Land (132 acres): Crown land not charged to Forestry Account...	...		
Buildings	2,271	7	4
Live-stock	274	0	0
Improvements	727	4	9
Fencing	617	10	8
Stores in hand	692	4	4
	£4,582	7	1

Schedule V.—Details of One-year-old Trees, sown 1912–13.

Name of Tree.	Number in Seed-beds.	Height, in Inches.	Seed sown.	Value per Thousand.			Total Value.			Remarks.
			lb.	£	s.	d.	£	s.	d.	
Larix europaea	700,000	2	199	1	0	0	700	0	0	Germinated well. Damaged by grub.
Pinus Laricio	840,000	1½	116	1	0	0	840	0	0	Fair crop.
„ ponderosa	170,000	2	90	1	0	0	170	0	0	Strong plants.
„ Benthamiana	13,000	2	12	1	5	0	16	5	0	„
„ radiata	100,000	4	16	1	0	0	100	0	0	Satisfactory results.
„ muricata	48,000	2½	7	1	0	0	48	0	0	Sturdy plants.
„ maritima	8,000	2	2	1	0	0	8	0	0	„
„ taeda	8,000	2½	2	1	0	0	8	0	0	Strong plants.
„ Torreyana	1,000	3	3	1	5	0	1	5	0	„
Pseudo-tsuga taxifolia	230,000	1	20	1	5	0	287	10	0	Germinated excellently.
Picea pinsapo	50	1	oz. 3	1	0	0	0	1	0	Experimental.
„ Nordmanniana	300	1	lb. 4	1	0	0	0	6	0	„
Cupressus macrocarpa	200	3	3	1	0	0	0	4	0	Crop destroyed by grub.
Sequoia gigantea	400	1½	0¾	4	0	0	1	12	0	Fair crop.
„ sempervirens	300	1½	1½	4	0	0	1	4	0	„
Eucalyptus Stuartiana	1,000	5	oz. 1	0	10	0	0	10	0	Strong plants.
„ Gunnii	800	5	1	0	10	0	0	8	0	„
„ crebra	800	5	1	0	10	0	0	8	0	„
„ coriacea	150	3	1	0	10	0	0	1	6	„
„ amygdalina ..	100	3	1	0	10	0	0	1	0	„
Totals	2,122,100	..	..	..			2,183	15	6	

Two-year-old Trees, sown 1911–12.

Name of Tree.	Number in Seed-beds.	Number in Nursery-lines.	Height, in Inches.	Value per Thousand.			Total Value.			Remarks.
				£	s.	d.	£	s.	d.	
Pinus Laricio	1,015,000	..	2	1	5	0	1,268	15	0	Fair growth.
„ ponderosa	..	80,000	3	2	5	0	180	0	0	Well-grown trees.
„ Benthamiana	..	2,500	3	2	10	0	6	5	0	„
„ muricata	..	18,000	3	2	5	0	40	10	0	Not very robust.
„ radiata	..	9,000	7	2	5	0	20	5	0	„
„ strobus	..	2,000	1½	2	5	0	4	10	0	„
„ Banksiana	1,100	..	2	1	5	0	1	7	6	Sturdy plants.
„ patula	900	..	3	1	5	0	1	2	6	„
„ picea	200	..	1	1	5	0	0	5	0	„
„ Montezumae	300	..	2	1	5	0	0	7	6	„
„ Murrayana	200	..	2	1	5	0	0	5	0	„
„ sylvestris	150	..	1½	1	5	0	0	3	9	„
Larix leptolepis	..	25,000	4	2	5	0	56	5	0	Fair growth.
Picea excelsa	400	..	2½	1	5	0	0	10	0	„
„ sitchensis	1,500	..	2	1	10	0	2	5	0	„
Cupressus macrocarpa	..	13,000	7	2 1	5 5	0 0	29	5	0	„
Various trees	1,500	700	..	2	5	0	3	9	0	
Totals	1,021,250	150,200	..	..			1,615	10	3	
	1,171,450									

Three-year-old Trees, sown 1910–11.

Name of Tree.	Number in Nursery-lines.	Height, in Inches.	Value per Thousand.			Total Value.			Remarks.
			£	s.	d.	£	s.	d.	
Larix europaea	100,000	12	3	0	0	300	0	0	The unfavourable season experienced has not permitted trees generally to attain their customary robust growth.
Pinus Laricio	350,000	7	3	0	0	1,050	0	0	
„ ponderosa	140,000	4	3	0	0	420	0	0	
„ Benthamiana	6,000	4	3	5	0	19	10	0	
„ austriaca	3,000	5	3	0	0	9	0	0	
„ maritima	300	4	3	0	0	0	18	0	
„ muricata	300	7	3	0	0	0	18	0	
„ scopulorum	40	4	3	0	0	0	2	4	
„ strobus	100	2	3	0	0	0	6	0	
Pseudo-tsuga taxifolia	17,000	7	3	5	0	55	5	0	
Picea sitchensis	50,000	3	3	5	0	162	10	0	
Cupressus Lawsoniana	1,900	4	4	5	0	8	1	6	
Thuja plicata	4,000	10	3	10	0	14	0	0	
Alnus glutinosa	500	6	3	0	0	1	10	0	
Various trees	2,900	..	4	0	0	11	12	0	
Totals	676,040	..	..			2,053	12	10	

Trees transferred from Nursery to Plantations, &c., 1912–13.

Where sent.	Name of Tree.	Number.	Height, in Inches.	Value per Thousand.			Total Value.			Remarks.
				£	s.	d.	£	s.	d.	
Conical Hills Plantation	Larix europaea	422,375	15	3	0	0	1,267	2	6	An excellent growing percentage has resulted.
	Pinus Laricio	455,175	10	3	0	0	1,365	10	6	
	„ ponderosa	106,475	8	3	0	0	319	8	6	
	„ insignis	18,535	12	3	0	0	55	12	1	
	„ muricata	325	20	3	0	0	0	19	6	
	„ maritima	1,250	8	3	0	0	3	15	0	
	Pseudo-tsuga taxifolia ..	23,850	8	3	5	0	77	10	3	
	Picea sitchensis	9,075	10	3	5	0	29	9	10	
	„ excelsa	225	10	3	0	0	0	13	6	
	Thuja plicata	13,850	12	3	10	0	48	9	6	
	Cupressus macrocarpa ..	360	10	3	0	0	1	1	7	
	Alnus glutinosa	14,600	24	3	0	0	43	16	0	
	Fraxinus excelsior ..	9,950	10	3	0	0	29	17	0	
	„ americana ..	1,625	10	3	0	0	4	17	6	
	Betula alba	3,150	10	3	0	0	9	9	0	
	Populus fastigiata ..	3,425	..	2	0	0	6	17	0	
	Salix viminalis	4,475	..	2	0	0	8	19	0	
		1,088,720	..	..			3,273	8	3	
Dusky Hill Plantation	Pinus Laricio	9,000	10	3	0	0	27	0	0	Used for replacing failures in previous plantings.
	„ insignis	650	12	3	0	0	1	19	0	
	Thuja plicata	850	12	3	10	0	2	19	6	
	Fraxinus excelsior ..	1,000	10	3	0	0	3	0	0	
		11,500	..	..			34	18	6	
Selwyn Plantations	Pinus insignis	1,000	12	3	0	0	3	0	0	Used for sand-dune planting.
	„ maritima	750	8	3	0	0	2	5	0	
	„ muricata	250	8	3	0	0	0	15	0	
		2,000	..	..			6	0	0	
Conical Hills Plantation	As per details above ..	1,088,720	..	..			3,273	8	3	
Dusky Hill Plantation	„ ..	11,500	..	..			34	18	6	
Selwyn Plantations	„ ..	2,000	..	..			6	0	0	
Queenstown Domain Board	Assorted trees	1,000	..	..			3	0	0	
New South Wales Government	„	1,700	..	..			5	2	0	
Hyde Domain Board	„	870	..	..			2	12	2	
Totals ..	..	1,105,790	..	..			3,325	0	11	

W. T. Morrison,
Nursery Foreman.

R. G. Robinson,
Superintending Nurseryman.

Two-year-old Pinus Laricio in Seed-beds.

Beech Forest and Artificial Plantation at Dusky Hill, intersected by Pomahaka Rive

Flourishing Picea excelsa Compartment at Conical Hills. More Vigorous Growth is made on Lower Ground.

Populus deltoides at Dusky Hill Plantation, Age Fourteen Years, Height 38 Feet.

Conical Hills Plantation, Otago.

(Area, 3,672 acres; altitude, 400 ft. to 1,050 ft.; commenced operations, 1903.)

Instruments for registering meteorological data were acquired for this station, and being placed at an elevation of about 1,000 ft., the comparative value of such records with those kept on the lower altitudes has more than compensated for the small expenditure thus incurred. During the year 38·55 in. of rain fell on 164 days. The maximum shade temperature was 86° in February and the lowest 22° on several occasions in July and August. Freezing-point was reached on seventy-two nights, and, as might be anticipated, the five frosts occurring late in October proved somewhat detrimental to the leaders of the less hardy varieties of trees. Although we do not possess the appliances for ascertaining details of wind-pressure, it is indeed doubtful if in any previous year since operations began here the south-westers have been either so persistent or of such force, and under these conditions it is not surprising to find youthful trees occupying exposed situations acquiring a decided tendency to lean to the leeward side.

In this brief review of the year's work it is encouraging to be able to allude to the satisfactory results achieved. Much headway has been made by the well-established trees, and the issue from the season's planting has been equally encouraging, probably only 5 per cent. of deaths accruing from the 1,088,720 trees operated with. Notwithstanding the prevalence of an unhealthy appearance throughout the *Larix europea* blocks, it is questionable if over any similar period more vigorous headway has been made by the larch, whose height has been increased from 15 in. to 24 in. With each succeeding year the meritorious growing qualities of *Pinus laricio* is made evident, and its progress has so far been checked neither by climatic influences nor pests of any kind, and a steady increase annually of from 15 in. to 20 in. has been maintained since the second year after planting. Under similar conditions *Pinus austriaca* are thriving; but the species has contracted, though only in a mild form, the disease known as pine aphis (*Chermes laricis*), which, according to personal observation in older plantations, seriously interferes with the pine in its youth, but appears to lose its influence with the tree's advancing age. Again *Pinus ponderosa* has demonstrated the various conditions under which it may be successfully planted, whether on semi-fertile flats or exposed rocky ledges; where the surface soil is not over abundant this yellow-pine succeeds with a consistent annual progress of from 9 in. to 13 in. Although the *Picea excelsa* have for years remained almost stationary (with the exception of those growing in the more favoured positions), it is not unreasonable, in view of their present healthy state and sturdy growth, to forecast the continuation of the past season's headway and subsequent development into commercially valuable timber, although it is not the present desire of the Department to extend the Norway deal compartments. As hitherto recorded, the Oregon pine (*Pseudo-tsuga taxifolia*) flourishes on low altitudes, where the soil is of at least fair fertility and shelter abounds. An annually recurring trouble in the Oregon compartments, which contain 87,325 trees, is, however, the injury to leaders by heavy winds; but should a wind-barrier be provided prior to operating with this valuable tree, no reason can be advanced why complete success should not be the outcome. On the low-lying areas both *Alnus glutinosa* and *Populus deltoides* are showing their partiality for the conditions. Of the two varieties, alder maintains more consistent growth, with an average annual headway of about 18 in., or 2 in. in excess of the poplar. In accordance with a projected scheme for covering the hilltops with *Pinus radiata* and effecting the double purpose of shelter and dense forest, some 18,250 pines of this species were planted, but only with a fair measure of success, owing to heavy gales interfering with their root-hold at a critical period. Where established, both *Pinus radiata* and *Pinus muricata* yearly make from 30 in. to 48 in. of vertical headway, and are both reliable shelter-producers. Experience gained here clearly shows the fallacy of attempting to grow any of the hardwoods on exposed hillsides. Shelter and a soil of medium fertility is essential, and under such conditions ash and oak are readily responding. A small experimental lot of *Pinus rigida* promises well, but *Pinus strobus* are evidently occupying an uncongenial position.

Pitting and Tree-planting.—In carrying out the usual yearly replanting-work some 58,085 trees were utilized, which reduces the number available for extension purposes to 1,030,635. In view of the mutual benefit arising from contract planting, a similar arrangement to that of the previous year was adopted, and employees were able to earn a reasonable wage by planting at 12s. 6d. per thousand. The preparation of 1,288,060 grubber pits was also undertaken at the same rate, and every satisfaction given. Our requirements being slightly exceeded owing to an unexpected decreased output of trees, the surplus pits will be availed of during the current year, when less expenditure will be necessary to carry on operations generally.

Fire-breaks.—The fact of having ploughed, disced, and harrowed some 93 acres of fire-break on this station alone this year should impress persons who are repeatedly referring to our lack of attention in providing barriers to any fire that might arise either from outside or within the forest reserve that this phase of afforestation receives full consideration. There will always be danger from conflagrations, particularly when plantations are surrounded by holdings where tussock growth is abundant; but such danger is reduced to a minimum whilst the gang of men are in the vicinity of the outbreak. Great uneasiness would be felt, however, in the event of any outbreak at such a time when firefighters were unprocurable, and, although our external fringing fire-breaks might check the progress of the fire unaided notwithstanding the prevalence of a high wind, there is always the danger of burning debris being blown from a considerable distance and defeating the object of our cultivated breaks. To renew his pasture, an owner of adjoining property fired the tussocks; but a strong wind springing up made the position somewhat serious until the Department's employees came on the scene and assisted in the timely suppression of the "burn." In pursuance of a scheme outlined in last report, an experiment having an economic bearing on fire-break work was satisfactorily launched, and results point conclusively to the advantage that may be derived by grazing fire-break areas with sheep. Some 55 chains of fencing were used in forming an enclosure of about 12 acres fringing the Pomahaka River, and during the spring and summer months some twenty wethers were permitted to graze over the reserve. As the herbage was closely cropped, the fire-preventive measure was quite as effectually accomplished as if the area had been ploughed. The external fire-line was extended some 116 chains, and this affords the desired protection on the western side

Divisional Plans.—The appended plan, showing the planting arrangement and acreages, was carefully prepared by local officers in the absence of a qualified surveyor, and will suffice until the whole area is planted, when much advantage would accrue from the preparation of a perfectly accurate drawing.

General Maintenance.—Reference to the associated statement of expenditure will show that £1,020 4s. 7d. was spent under the item of "General Upkeep," which included such works as removal of coarse undergrowth, tree-pruning, repairing of roads, providing employees with fuel, cutting noxious weeds, horse-shoeing and repairs, rabbiting, and other minor works.

The expenditure for the year amounted to £2,975 15s. 9d. (being an outlay of £241 16s. 3d. less than that of the previous twelve months), which provided employment for an average of 20·8 men.

Since the initiation of the afforestation-work at this station £23,748 12s. 1d. has been expended, details of which are outlined on the table appended hereto

The following is the first record of the year's rainfall and temperature taken at this station :—

Schedule I.

Month.	Rainfall.	Number of Days Rain fell.	Temperature.		Number of Days Frosts occurred.
			Maximum.	Minimum.	
1912.	Inches.		Degrees.	Degrees.	
April	1·21	12	74	29	1
May	3·54	14	64	26	14
June	6·96	22	54	25	11
July	1·96	10	58	22	19
August	1·62	12	64	22	17
September	2·77	11	62	30	3
October	4·77	14	64	31	5
November	2·79	18	68	38	..
December	1·25	8	82	40	..
1913.					
January	2·48	11	83	38	..
February	3·77	14	86	32	1
March	5·43	18	80	32	1
Totals	38·55	164	..	..	72

Schedule II.—Statement of Expenditure.

	For Year. £	s.	d.	To Date. £	s.	d.
Planting operations and maintenance—						
Tree-planting	621	8	6	5,158	6	1
Pitting	805	3	4	7,003	8	11
Clearing	30	19	6	697	2	8
Cartage of trees	32	4	6	353	19	11
General upkeep of plantation ...	1,020	4	7	5,671	10	7
General repairs	62	9	0	433	18	5
Horse-feed	54	5	8	151	16	4
Permanent works—						
Fencing	39	4	3	1,203	15	0
Formation	9	7	0	268	18	10
Buildings	6	7	0	320	7	11
Stock, implements, &c.—Tools, implements	34	2	5	316	18	1
Supervision and clerical—						
Salaries—						
Supervision of free labour ...	185	0	0	1,565	0	0
Superintending Nurseryman's proportion and clerical assistance	75	0	0	603	9	4
	£2,975	15	9	£23,748	12	1

Schedule III.—Trees Account.

	Number.
Trees received during year	1,088,720
Less to replace blanks	58,085
Planted on new area	1,030,635
Previously planted	6,695,712
Total number planted on 2,838 acres (average age, five years and three-quarters)...	7,726,347

Schedule IV.—Property Account.

	£	s.	d.
Land (3,672 acres): Crown land, not charged to Forestry Account	...		
Buildings	320	7	11
Live-stock	...		
Improvements	268	18	10
Fencing	1,203	15	0
Stores in hand	137	2	3
	£1,930	4	0

Balance-sheet.

	£	s.	d.
Total expenditure	23,748	12	1
Less Property Account	1,930	4	0
Cost of operations	£21,818	8	1
2,838 acres planted (average age, five years and three-quarters).			
Estimated value of plantation per acre	£10	2	6

Summary of Trees in various Blocks at Conical Hills Plantation.

No. of Block.	Year planted.	Area planted.	Name of Tree.	Number planted.	Total Number.	Remarks.
		Acres.				
I	1903	56	Fraxinus excelsior	76,350	..	Mixed.
			Picea excelsa	76,350	..	..
					152,700	
		4	Fraxinus excelsior	10,275	..	Pure.
					10,275	
II	1904	37	Quercus pedunculata	23,025	..	,,
			Acer pseudo-platanus	53,150	..	,,
			Juglans regia	14,600	..	,,
			Sophora tetraptera	225	..	,,
			Cytisus laburnum	2,550	..	,,
			Betula alba	250	..	..
			Populus (vars)	2,550	..	..
			Alnus glutinosa	725	..	,,
			Pyrus aucuparia	2,750	..	..
					99,825	
		65	Larix europaea	179,075	..	,,
					179,075	
		79	Pinus austriaca	69,000	..	,,
			,, Laricio	100,000	..	,,
			,, ponderosa	18,250	..	Mixed.
			,, Benthamiana	24,950	..	,,
			,, strobus	1,900	..	Pure.
			,, halepensis	325	..	,,
					214,425	
		106	Picea excelsa	179,225	..	Mixed.
			Fraxinus excelsior	101,625	..	,,
			Picea sitchensis	2,950	..	Pure.
			Pseudo-tsuga taxifolia	5,775	..	,,
					289,575	
III	1905	78	Pinus austriaca	90,500	..	,,
			,, ponderosa	9,850	..	,,
			,, Benthamiana	3,450	..	,,
			,, rigida	750	..	,,
			,, radiata	6,075	..	Windbreak.
			,, Laricio	100,000	..	Pure.
			,, strobus	3,150	..	,,
					213,775	
		96	Fraxinus excelsior	74,725	..	Mixed.
			Picea excelsa	150,675	..	,,
			Pseudo-tsuga taxifolia	35,875	..	Pure.
			Picea sitchensis	275	..	,,
					261,550	
		34	Larix europaea	93,565	..	,,
					93,565	

Summary of Trees in various Blocks at Conical Hills Plantation—continued.

No. of Block.	Year planted.	Area planted.	Name of Tree.	Number planted.	Total Number.	Remarks.
		Acres.				
III	1905	9	Larix europaea	13,610	..	Mixed.
			Pinus Laricio	10,888	..	,,
					24,498	
		28	Acer pseudo-platanus	47,996	..	Pure.
			Alnus glutinosa	6,025	..	,,
			Pyrus aucuparia	445	..	,,
			Acer saccharum	525	..	,,
			Robinia pseudo-acacia	6,975	..	,,
			Populus (vars)	3,150	..	,,
			Cytisus laburnum	7,625	..	,,
			Juglans regia	4,180	..	,,
					76,921	
IV	1906	91	Pinus ponderosa	32,625	..	Mixed.
			,, Laricio	12,140	..	,,
			,, strobus	75	..	,,
			,, rigida	75	..	,,
			,, muricata	5,375	..	Mixed windbreak.
			,, radiata	1,308	..	Ditto.
			,, austriaca	196,875	..	Pure.
					248,473	
		99	Picea excelsa	189,300	..	Mixed.
			Fraxinus excelsior	55,650	..	,,
			,, americana	1,475	..	,,
			Pseudo-tsuga taxifolia	23,850	..	Pure.
					270,275	
		57	Larix europaea	155,340	..	,,
					155,340	
		45	Quercus pedunculata	36,075	..	Mixed.
			Acer pseudo-platanus	28,800	..	,,
			,, saccharum	2,050	..	Pure.
			Betula alba	50,600	..	,,
			Juglans regia	1,300	..	,,
			Robinia pseudo-acacia	1,375	..	,,
			Populus (vars)	2,825	..	,,
					123,025	
		10	Larix europaea	13,610	..	Mixed.
			Pinus Laricio	13,610	..	,,
					27,220	
V	1907	45	Pinus austriaca	22,875	..	Pure.
			,, Laricio	54,575	..	Mixed.
			,, ponderosa	27,675	..	,,
			,, Benthamiana	10,720	..	,,
			,, muricata	5,775	..	Windbreak.
					121,620	
		67	Larix europaea	181,400	..	Pure.
					181,400	
		23	Picea excelsa	62,675	..	,,
					62,675	
		13	Betula alba	31,425	..	,,
			Quercus pedunculata	2,500	..	,,
			Populus fastigiata	2,750	..	,,
					36,675	
VI	1909	92	Pinus Laricio	183,575	..	Mixed.
			,, austriaca	34,875	..	,,
			,, ponderosa	20,925	..	,,
			,, Benthamiana	12,525	..	,,
					251,900	
		315	Larix europaea	858,350	..	Pure.
					858,350	
		65	Picea excelsa	120,650	..	Mixed.
			,, sitchensis	45,000	..	,,
			Pseudo-tsuga taxifolia	5,225	..	,,
			Fraxinus excelsior	4,925	..	,,
			,, americana	925	..	,,
					176,725	

Summary of Trees in various Blocks at Conical Hills Plantation—continued.

No. of Block.	Year planted.	Area planted.	Name of Tree.	Number planted.	Total Number.	Remarks.
		Acres.				
VI	1909	37	Acer pseudo-platanus	33,700	..	Pure.
			Quercus pedunculata	54,175	..	,,
			Alnus glutinosa	13,500	..	,,
					101,375	
VII	1910	220	Larix europaea	600,250	..	,,
					600,250	
		202	Pinus Laricio ..	512,203	..	Mixed.
			,, austriaca	15,600	..	,,
			,, ponderosa	13,053	..	,,
			,, Benthamiana	7,925	..	,,
					548,781	
		31	Fraxinus excelsior	16,225	..	,,
			Picea excelsa ..	36,700	..	,,
			,, sitchensis	15,050	..	,,
			Pseudo-tsuga taxifolia	16,600	..	,,
					84,575	
		17	Betula alba ..	14,625	..	Pure.
			Alnus glutinosa	7,900	..	,,
			Quercus pedunculata	18,050	..	,,
			Acer pseudo-platanus	1,025	..	,,
			Fagus sylvatica	4,250	..	,,
			Sequoia sempervirens	200	..	,,
			Thuja gigantea	25	..	,,
					46,075	
VIIA	1910	27	Pinus Laricio ..	36,747	..	Mixed.
			,, ponderosa	36,747	..	,,
					73,494	
VIII	1911	210	Larix europaea	572,725	..	Pure.
					572,725	
		183	Pinus Laricio ..	258,825	..	Mixed.
			,, ponderosa	215,350	..	,,
			,, austriaca	23,400	..	Pure.
			,, muricata	575	..	,,
			,, Benthamiana	200	..	Mixed.
			,, Jeffreyii	25	..	,,
			Picea sitchensis	100	..	,,
					498,475	
		8	Fraxinus excelsior	21,575	..	Pure.
					21.575	
		4	Thuja gigantea	10,450	..	,,
					10.450	
		3	Betula alba ..	8.075	..	,,
					8.075	
IX	1912	212	Pinus Laricio ..	437.175	..	..
			,, insignis ..	18.075	..	..
			,, ponderosa	100,000	..	,,
			,, maritima	1,250	..	,,
			,, muricata	325	..	..
			Cupressus macrocarpa	360	..	..
			Thuja plicata ..	13,850	..	..
					571.035	
		157	Larix europaea	422,375	..	,,
					422.375	
		8	Fraxinus excelsior	9.950	..	..
			,, americana	1,625	..	..
			Betula alba ..	3.150	..	..
			Salix viminalis..	4,475	..	,,
			Populus fastigiata	3,425	..	..
					22,625	
		5	Alnus glutinosa	14,600	..	,,
					14,600	
Totals	..	2,838	..	..	7,726,347	

H. Howe,
Plantation Foreman.
H. G. Robinson,
Superintending Nurseryman.

DUSKY HILL PLANTATION, OTAGO.

(Area, 845 acres; altitude, 400 ft. to 800 ft.; commenced operations, 1898.)

A comparison of the meteorological statistics between this and other local stations shows that, although the total rainfall for the year almost coincided, the precipitations were somewhat more frequent. The influence of the favourable season upon the larch is decidedly conspicuous, and, although perhaps tree-growth was not marked by any greater rapidity, a more healthful tone now certainly prevails over the *Larix europaea* blocks where two years ago unseasonable defoliation occurred. The partial discoloration of needles during the summer months is still apparent; but indications point to a gradual recovery from what appeared to be a fungus disease, and which is now attributed to the effects of the prolonged dryness experienced during the year 1909.

Allusions to Tree-growth.—In commenting upon the progress of different varieties of trees and their success in association, the undertaking of experimental work here for the benefit of the more recently created plantations cannot be lost sight of. Anticipations of prominent writers have not been borne out by the progress of the various trees used in mixture, and it is quite certain that knowledge of the local possibilities of each variety operated with must also be gained before even a partial success can be obtained in mixed planting.

Originally a compartment was formed of larch, Oregon pine, ash, and Norway spruce. The ultimate crop was to be Oregon pine and ash, and the functions of the larch were principally to nurse the more valuable trees. Contrary to expectations, however, most inconsistent headway has been made by the ash and Oregon pine, as only about 35 per cent. of the latter and 10 per cent. of the former trees have been able to keep apace with the rapidly progressing larch, and, strangely enough, the Norway spruce, a supposed shade-bearer, remains at thirteen years of age only about a foot taller than when planted, whilst the nurses have attained an average height of about 36 ft. Throughout this compartment exceedingly strong specimens of Oregon pine, measuring at breast-high about 25 in. in girth, are noticeable, clothed almost to the ground-surface with strong live branches, and clearly demonstrating the necessity of closer planting and the failure of the surrounding larch to sufficiently check the natural branching habit of the valuable evergreen. Each succeeding year the superiority of Japanese larch over the European species in uniformity of growth and healthfulness is proved. It is a somewhat slower grower here, but an examination of the interior discloses a greater evenness in pole development, with laterals of a more slender nature. After harbouring a belief for some years that all the *Picea excelsa* and *Picea sitchensis* would eventually respond to the conditions and make rapid headway, we are forced by their continued sluggish growth to admit that the spruces will not succeed on the very exposed sidelings, although where the soil is more fertile and partial shelter is available the prospects are excellent. A shelter-break of *Pinus radiata* bordering the Pomahaka River has been planted, and further experimental work in loosening the surface around each tree is in operation, so that it may yet be possible to report favourably on the spruce-plantations. An improvement in the growth of the hardwoods—*Fraxinus excelsior*, *Fraxinus americana*, *Quercus pedunculata*, and *Acer pseudo-platans*—is due to the abundance of moisture; but the suceptibility to injury from early frosts was again shown by the walnuts and chestnuts and any belief that either of these trees can be satisfactorily grown for timber purposes locally should now be discarded. The *Pinus Laricio* and *Pinus austriaca* are justifying their inclusion here by healthy and speedy development. Of the two pines, the Corsican species, by a regular annual growth of about 16 in., promises to surpass the Austrian, which, however, is probably hampered slightly by the presence of the white aphis, whose influence temporarily lessens the yearly growth by from 2 in. to 4 in. During the past two seasons exceedingly good results in the pure *Populus deltoides* stand is noticeable; but, as may be seen from the photograph herewith, the branching habit requires controlling by closer planting. The cuttings were planted fourteen years ago at from 6 ft. to 7 ft. over a swampy area, and the trees have now attained a height of from 36 ft. to 40 ft.

Red Deer.—The presence of the red deer is decidedly irritating, and the animals continue to injure the young hardwoods. It is safe to assert that some hundreds of valuable ash-trees, ranging from 3 ft. to 10 ft. high, have been destroyed by this agency, although not irretrievably, as by judicious pruning it is possible to foster a new robust leader when the root system is in a healthy state. A suitable rifle being procured during the year, a stalking expedition was arranged occasionally, and it is gratifying to be able to say that four trespassing animals were thus destroyed, although the density of the plantation renders the complete eradication of the pest a tedious matter.

General Maintenance.—Rather more labour was devoted to tree-pruning than usual, and the item "Removal of coarse growth from around trees" helped to increase the expenditure under this heading to £122 16s. 6d.

Realizing that the removal of decayed lateral branches of larch requires to be undertaken as soon as possible, the trial cutting over some acres was continued, and proved somewhat more costly than we anticipated. One man was able to cut and remove the small branches from 400 to 500 trees per day, so that such labour could not be carried on over an acre under the present conditions for less than £2.

Some 11,500 trees, principally *Pinus Laricio*, were received from Tapanui Nursery, and used for replanting purposes, and arrangements are now well in hand to continue this seasons's policy begun of replanting small blocks containing bark-bound hardwoods.

All fire-breaks were put into an effective state somewhat earlier than usual; but little anxiety from fires was felt here, as rarely was the vegetation sufficiently dry to permit of firing.

A useful shed of small dimensions was erected for the storage of tools, and minor improvements were effected to gates and buildings.

An expenditure of £346 10s. 10d. was incurred during the year, which advances the total expenditure to £13,185 8s.

Schedule II.—Statement of Expenditure

	For Year.			To Date.		
	£	s.	d.	£	s.	d.
Planting operations and maintenance—						
Tree-planting	...			3,094	16	2
Pitting	...			3,619	2	7
Clearing	...			496	5	11
Cartage of trees	...			216	12	8
General upkeep of plantation	122	16	6	2,696	1	2
General repairs	9	14	6	70	15	5
Horse-feed	3	18	2	130	16	6
Permanent works—						
Fencing	...			258	2	3
Formation	...			366	7	2
Buildings	30	1	8	403	11	6
Stock, implements, &c.—Tools, implements	...			153	12	6
Supervision and clerical—						
Salaries—						
Supervision of free labour	160	0	0	1,270	10	0
Superintending Nurseryman's proportion of and clerical assistance	20	0	0	408	14	2
	£346	10	10	£13,185	8	0

Schedule III.—Trees Account.

	Number.
Trees received during year	11,500
Less to replace blanks	11,500
Planted on new area	...
Previously planted	2,180,837
Total number planted on 845 acres (average age, nine years)	2,180,837

Schedule IV.—Property Account.

	£	s.	d.
Land (845 acres): Crown land not charged to Forestry Account	...		
Buildings	403	11	6
Live-stock	...		
Improvements	366	7	2
Fencing	258	2	3
Stores in hand	24	7	11
	£1,052	8	10

Balance-sheet.

	£	s.	d.
Total expenditure	13,185	8	0
Less Property Account	1,052	8	10
Cost of operations	£12,132	19	2
845 acres planted (average age, nine years).			
Estimated value of plantation per acre	£11	15	0

F. Benfell,
Plantation Foreman.
R. G. Robinson,
Superintending Nurseryman.

Waitahuna Plantation, Otago.

(Dredged area, 11 acres; altitude, 331 ft.; commenced operations, 1906.)

Sufficient data has now been secured from this experimental area to permit, without apprehension for the results, the furtherance of any projected extension tree-planting work being carried on under similar conditions. Although exceedingly rapid growth is being made by several varieties of trees, such progress is surpassed by the alarming vigour, within the reserve, of the noxious plants, gorse and broom, which, although annually attended to, have spread so rapidly as to necessitate the allocation of a greater expenditure in this direction with each succeeding year since commencing operations. The secret of success, then, lies in the fact of operating solely with the fast-growing trees, or those that create early density. Prior to planting, all traces of the noxious plants were removed; but this did not prevent thousands of seedlings from springing up almost immediately after, and, where such comparatively slow-growing trees as *Pinus strobus*, *Pseudo-tsuga taxifolia*, *Picea excelsa*, and *Fraximus excelsior* are situated, much expense is necessary in protecting the leaders from injury.

Although no meteorological records are available, it is evident by the issue of double leaders and injury to foliage that a severe early frost was experienced in this district, and the European larch and Oregon pine appear to have suffered mostly. Of the shelter trees, *Pinus muricata* is growing with greater vigour than *Pinus radiata*, although the latter species have increased their height by nearly 30 in. Both *Pinus ponderosa* and *Pinus Laricio* are thriving, and undoubtedly these two varieties of trees would constitute the main body of future artificial forests on dredged tailings. After promising well, the *Larix europaea* are beginning to assume a somewhat sickly appearance over the lower branches, but by next report it will be possible to determine if this discoloration can be rightly attributed to climatic influences. Satisfactory headway is also being made by alder, birch, and poplar, whilst Oregon pine is succeeding where a greater proportion of clay and soil is incorporated with the gravel and boulders. The clearance of noxious weeds was begun after the closing of the year's accounts, and such expenditure will therefore be excluded from the current season's statements.

The expenditure to date reaches £203 0s. 7d., as per details on schedule hereunder.

Schedule II.—Statement of Expenditure.

	For Year. £ s. d.	To Date. £ s. d.
Planting operations and maintenance—		
Tree-planting	...	20 2 0
Pitting	...	27 6 0
Clearing	...	23 0 3
Cartage of trees	...	3 0 0
General upkeep of plantation	..	37 2 3
General repairs	...	4 0 0
Permanent works—		
Fencing	...	57 11 1
Formation	...	3 10 0
Stock, &c.	...	...
Supervision and clerical Salaries—		
Supervision of free labour	...	9 0 0
Superintending Nurseryman's proportion and clerical assistance	...	18 9 0
	...	£203 0 7

Schedule III.—Trees Account.

	Number.
Trees received during year	...
Less to replace banks	...
Planted on new area	...
Previously planted	30,525
Total number planted on 11 acres (average age, five years)	30,525

Schedule IV.—Property Account.

	£ s. d.
Land (11 acres): Crown land not charged to Forestry Account	...
Buildings	...
Live-stock	...
Improvements	3 10 0
Fencing	57 11 1
Stores in hand	...
	£61 1 1

Balance-sheet.

	£ s. d.
Total expenditure	203 0 7
Less Property Account	61 1 1
Cost of operations	141 19 6
11 acres planted (average age, five years)	...
Estimated value of plantation per acre	£10 5 0

R. G. Robinson,
Superintending Nurseryman.

Eweburn Nursery, Ranfurly, Central Otago.

(Area, 49 acres; altitude, 1,400 ft.; established, 1896.)

The rainfall recorded at this station for the past year was 22·67 in., which fell on 122 days. This is an exceptional fall for here, and beats all previous records. The rainfall exceeded that of the preceding year by 6·41 in. The lowest reading of the thermometer in the screen was 11°, on the 11th of August, and on the ground 8°, on the 13th August, 1912. The number of nights frost occurred on in the screen was 129 and on the ground 190 nights. The maximum shade-temperature was 84°, on the 19th January, 1913. The rainfall for the year has been very evenly distributed, except in the month of December, when it only registered 56 points. The season altogether has been very favourable to tree-growth generally, and the crop of seedlings is one of the best yet raised here.

The work of sowing seeds was commenced on the 20th September, which is somewhat earlier than usual, and with very beneficial results, and I am of opinion that early sowing is the best for this station. The estimated number of seedlings raised is 1,435,750, and their value £1,438 9s. 3d. The *Larix europaea* have done exceedingly well; but, owing to the unsatisfactory nature of this tree on the plantations, I am of opinion that it would be wise to discard it, and substitute pines in preference.

Lining-out trees was commenced on the 4th September, but owing to the small number of trees to handle, the work was of short duration. The cause of such shortage is that only a small quantity of seed was available, and the output depends on the amount of seed sown and successful germination. In consequence of this shortage, there will only be some 200,000 trees available for removal to the plantation.

During the year 36 acres of land was broken up at Gimmerburn and sown down in oats, and the result has been very satisfactory, there being about 65 tons of clean oaten sheaf for chaffing. This will be cut up for use here and at other stations as required.

The nursery live-stock has been increased by the addition of a fine foal.

All tools, buildings, roads, &c., have been kept in repair, and hoeing, weeding, watering, &c., have also been carried out when necessary. The trees in stock have made very satisfactory growth for the year.

The expenditure for the year amounts to £1,081 18s. 1d., and the total to date £14,046 14s. 8d.

The number of trees transferred to the Naseby Plantation was 608,250, and 7,360 to other stations and public bodies, their value being £1,698 17s. 1d.

The number of trees of all ages on the 31st March, 1913, is 2,364,850, and their value £2,839 18s. 3d.

The average number of men employed during the year was 5·94.

Schedule I.

Month.	Rainfall.	Number of Days Rain fell.	Temperature.		Number of Days Frosts occurred.
			Maximum.	Minimum.	
1912.	In.		Deg. Fahr.	Deg. Fahr.	
April	1·38	9	71	29	10
May	0·93	10	59	21	21
June	2·32	16	53	20	24
July	2·07	10	53	21	26
August	1·50	10	50	11	25
September	1·32	9	64	26	8
October	3·71	11	69	29	9
November	1·63	11	75	34	..
December	0·56	5	81	30	1
1913.					
January	2·69	9	84	30	1
February	1·65	8	83	29	2
March	2·91	14	75	23	2
Totals	22·67	122	..	..	129

Schedule II.—Statement of Expenditure

	For Year.			To Date.		
	£	s.	d.	£	s.	d.
Tree-planting and maintenance—						
Tree-growing	314	6	10	5,488	1	10
General maintenance and repairs ..	302	14	9	2,838	11	9
Tree-seeds	44	11	6	542	11	2
Manures	...			40	15	3
Horse-feed, purchased and grown ...	155	11	2	669	15	6
Miscellaneous works	6	6	6	51	5	1
Stock and material—Tools, implements ...	7	16	4	839	12	3
Permanent works—						
Buildings	...			830	11	2
Nursery-formation	48	11	0	673	9	4
Fencing	...			340	1	0
Water-supply	...			310	0	10
Supervision and clerical—						
Proportion of Superintending Nurseryman's salary	25	0	0	472	7	4
Proportion of Nurseryman's salary ...	170	0	0	910	1	8
Clerical assistance	7	0	0	39	10	6
	£1,081	18	1	£14,046	14	8

Schedule III.—Trees Account.

—	During the Year.		Since 1896 to Date.		Estimated Value, as Schedule V.
	Number.	Cost of Raising.	Number.	Cost of Raising and Maintenance.	
		£ s. d.		£ s. d.	£ s. d.
Trees raised	1,435,750	133 9 10	5,606,972	14,046 14 8	..
Trees sent out	615,610	..	3,242,122	..	..
Balance in stock			2,364,850	..	2,839 18 3
Value of land, improvements, and stock (Property Account)				..	2,652 10 6
Total value					5,492 8 9

Schedule IV.—Property Account.

		£ s. d.
Land (50 acres).	Crown land not charged to Forestry Account ..	..
Buildings ..	.. ..	830 11 2
Live-stock ..	.. ..	139 7 5
Improvements	.. ..	983 10 2
Fencing ..	.. ..	340 1 0
Stores in hand	.. ..	359 0 9
Total ..	.. ..	£2,652 10 6

Schedule V.—Details of One-year-old Trees, sown 1912–13.

Name of Tree.	Number in Seed-beds.	Height, in Inches.	Amount of Seed sown.	Value per Thousand.	Total Value.	Remarks.
			lb.	£ s. d.	£ s. d.	
Pinus Laricio	443,000	1½	50	1 0 0	443 0 0	Healthy plants.
" ponderosa	181,900	2	24	1 0 0	181 18 0	Strong plants.
" Benthamiana	10,400	2½	8	1 5 0	13 0 0	Germination thin.
" Torreyana	450	6	1	1 5 0	0 11 3	Strong plants.
Larix europaea	800,000	6	76	1 0 0	800 0 0	Even crop.
Totals	1,435,750	..	..	..	1,438 9 3	

Two-year-old Trees, sown 1911–12.

Name of Tree.	Number in Seed-beds.	Number in Nursery-lines.	Height, in Inches.	Value per Thousand.	Total Value.	Remarks.
				£ s. d.	£ s. d.	
Pinus Laricio	535,000	..	3	1 5 0	668 15 0	Sturdy plants.
" ponderosa	52,200	..	6½	1 5 0	65 5 0	"
" Benthamiana ..	8,300	..	6	1 10 0	12 9 0	"
Larix europaea	197,600	..	12	1 5 0	247 0 0	"
Totals	793,100	..	..	..	993 9 0	

Three-year-old Trees, sown 1910–11.

Name of Tree.	Number in Nursery-lines.	Height, in Inches.	Value per Thousand.	Total Value.	Remarks.
			£ s. d.	£ s. d.	
Pinus Laricio	81,700	6	3 0 0	245 2 0	Sturdy plants.
" ponderosa	46,200	8	3 0 0	138 12 0	"
Larix europaea	8,100	6	3 0 0	24 6 0	"
Totals	136,000	..	..	408 0 0	

Trees transferred from Nursery to Plantations, &c., 1912–13.

Where sent.	Name of Tree.	Number.	Height, in Inches.	Value per Thousand.	Total Value.	Remarks.
				£ s. d.	£ s. d.	
Naseby Plantation ..	Pinus Laricio ..	438,425	8	3 0 0	1,315 5 6	Sturdy plants.
	" ponderosa ..	61,775	8	3 0 0	185 6 6	
	" austriaca ..	33,600	8	3 0 0	100 16 0	
	Larix europaea ..	59,300	12	1 5 0	74 2 6	
	Willow-cuttings ..	9,750	..	1 0 0	9 15 0	
	Poplar-cuttings ..	5,400	..	1 0 0	5 8 0	
		608,250	..	..	1,690 13 6	
Hyde Domain	Pinus ponderosa ..	250	..	..	0 15 0	
	" Laricio ..	140	..	..	0 8 5	
	Pyrus aucuparia ..	20	..	..	0 1 2	
Tapanui Nursery ..	Willow-cuttings ..	2,450	..	..	2 9 0	
	Poplar-cuttings ..	4,500	..	..	4 10 0	
Totals.. ..	..	615,610	..	..	1,698 17 1	

A. W. Roberts,
Nurseryman in Charge.

Naseby Plantation, Central Otago.

(Area, 1,350 acres; altitude, 2,300 ft.; commenced operations, 1900.)

The rainfall for the past year as recorded at this station was 29·36 in., on 146 days. The highest reading of the thermometer (in shade) was 84° in the months of January and February, 1913; and the lowest 8°, in the month of August, 1912. Frost occurred on 198 nights.

The season, taken on the whole, has been a very satisfactory one, except that the larch planted during the spring were badly frosted. The trees put out this season have done well, and the percentage of deaths should be very small. The trees previously planted have also made satisfactory growth, and these have been run through to replace blanks, so that the block is now well filled up.

The work of keeping down rabbits has been a source of trouble, and so long as they are so plentiful outside the enclosure they will always cause bother. In these parts the land is simply infested with the vermin outside, but through the vigilance of the employees the pest has been kept well under control, and little or no damage has been done.

During the year the crossings were formed in the plantation for the purpose of distributing the trees to the various sites, and drains opened up in wet places. The latter work will be continued during the coming year. By the addition of floors to the men's tents they have been made very much more comfortable.

Owing to the small output of trees for the incoming season, no pitting has been carried on during the fall of the year, there being sufficient over from last year to occupy all the available trees. After planting this season's trees there will not be sufficient ground for the reception of trees next season, and I would advise that the fence be extended in order to meet requirements. I would advise that this work be carried on as soon as possible, in order to get the land cleared of vermin before planting begins.

The fire-breaks have been reploughed, and are now in good order. Clearing all undergrowth from trees, painting gates, buildings, &c., have also been done, and all tools kept in good repair.

Planting was commenced in August and finished in November, the number of trees planted being 608,250, and of these 49,600 were used to replace blanks in the previous year's planting. The area planted for the season was 205 acres, making a total of 541 acres on the new site, and including the old one, 691 acres. The total number of trees on both sites is 1,856,359.

The expenditure for the year was £1,076 19s. 7d., and the total to date £6,432 11s. 3d.

Schedule 1.

Month.	Rainfall.	Number of Days Rain fell.	Temperature.		Number of Days Frosts occurred.
			Maximum.	Minimum.	
1912.	Inches.		Degrees.	Degrees.	
April	1·74	14	69	22	15
May	1·45	8	54	20	29
June	3·04	17	50	14	27
July	2·71	14	50	11	30
August	2·13	6	62	8	28
September	2·39	10	62	23	20
October	3·96	14	70	22	15
November	2·33	16	45	25	10
December	0·93	7	82	26	5
1913.					
January	2·91	14	84	26	6
February	1·94	13	84	26	6
March	3·83	13	74	24	7
Totals	29·36	146	..	..	198

Schedule II.—Statement of Expenditure.

	For Year.			To Date.		
	£	s.	d.	£	s.	d.
Planting operations and maintenance—						
Tree-planting	352	18	9	1,422	2	2
Pitting	254	17	6	1,590	8	9
Clearing	...			20	17	10
Cartage of trees	5	19	0	108	16	9
General upkeep of plantation... ...	256	2	0	1,423	19	10
General repairs	43	16	7	56	3	0
Horse-feed	...			164	10	0
Permanent works—						
Fencing	...			768	10	11
Formation	9	5	9	86	11	9
Buildings	...			116	11	1
Stock, implements, &c.—Tools, implements...	9	16	0	32	16	0
Supervision and clerical—Salaries—						
Supervision of free labour	112	4	0	425	14	11
Superintending Nurseryman's proportion and clerical assistance ...	32	0	0	215	8	3
	£1,076	19	7	£6,432	11	3

Schedule III.—Trees Account.

	Number.
Trees received during year	608,250
Less to replace blanks	49,600
Planted on new area	558,650
Previously planted	1,297,709
Total number planted on 691 acres (average age, seven years)	1,856,359

Schedule IV.—Property Account.

	£	s.	d.
Land (1,350 acres): Crown land not charged to Forestry Account ...	...		
Buildings	116	11	1
Live-stock	...		
Improvements	86	11	9
Fencing	768	10	11
Stores in hand	33	9	3
	£1,005	3	0

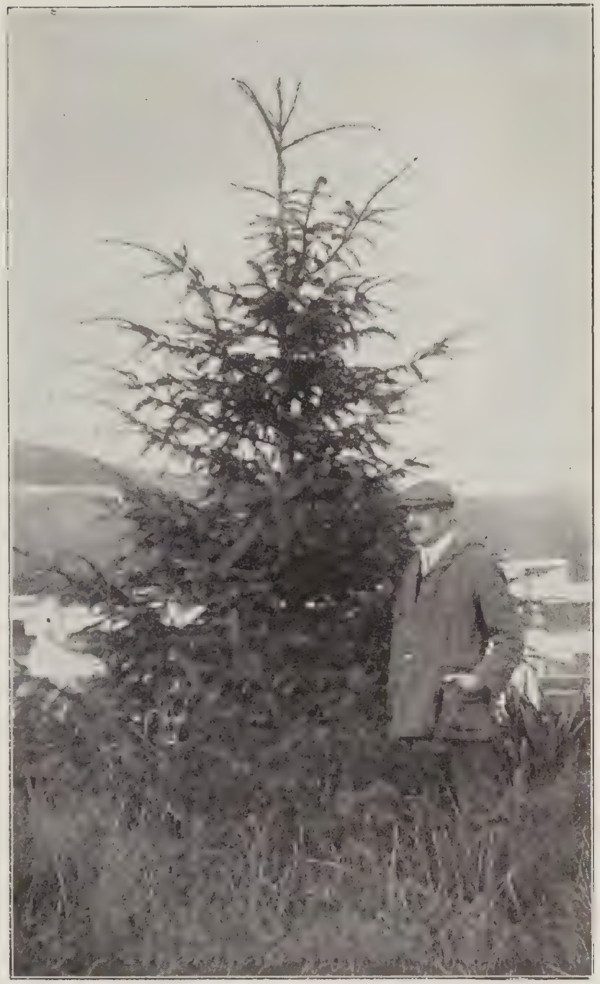
Balance-sheet.

	£	s.	d.
Total expenditure	6,432	11	3
Less Property Account	1,005	3	0
Cost of operations	£5,427	8	3
691 acres planted (average age, seven years).			
Estimated value of plantation per acre	£10	5	0

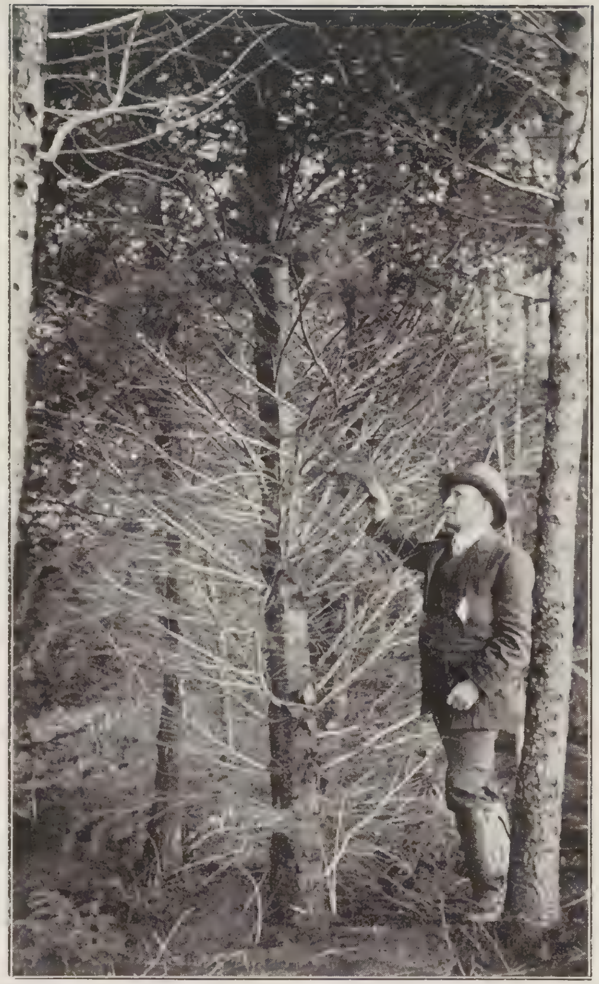
Summary of Trees in various Blocks at Survey Paddock Plantation.

No. of Block.	Year planted.	Area planted.	Name of Tree.	Number planted.	Remarks.
I ..	1900–2 ..	52¾	Larix europaea .. .. .. Pinus austriaca .. .. ,, Laricio .. .. .. ,, ponderosa	147,870	Mixed.
II ..	1902–4 ..	32¾	Pinus austriaca .. .. ,, ponderosa .. .. ,, Laricio	89,070	,,
III ..	1904–6 ..	24½	Pinus austriaca .. .. ,, ponderosa	66,500	,,
IV ..	1906–9 ..	28	Pinus austriaca .. .. ,, ponderosa	77,000	,,
		Various trees on fence-line and along fire-breaks		9,114	
		Total number of trees		389,554	

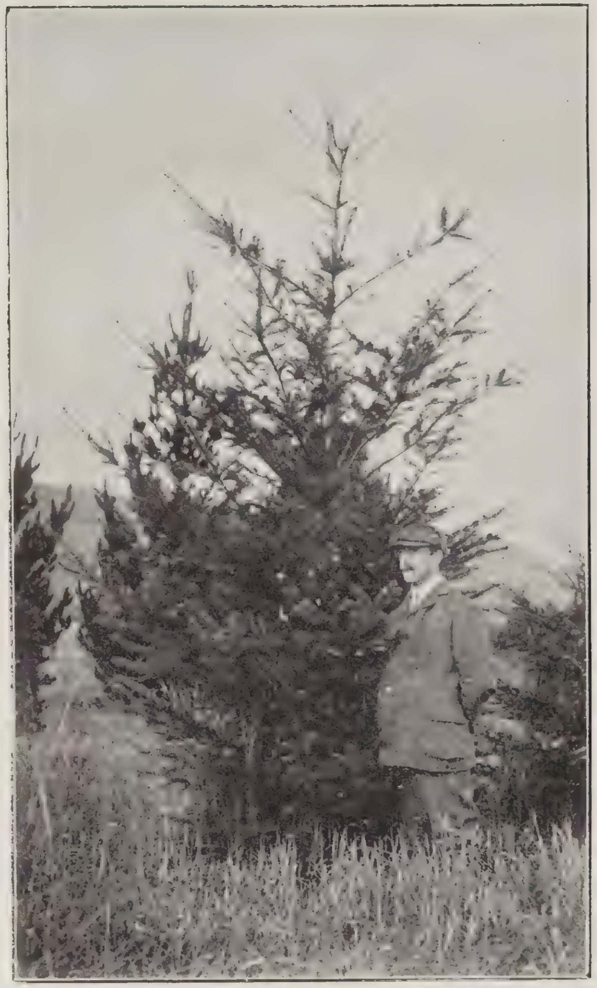
T. Screen,
Plantation Foreman.
A. W. Roberts,
Nurseryman in Charge.



Sitka Spruce, Tapanui, Age Nine Years, showing how Sensitive Leaders are injured by Winds.



Oregon Pine at Dusky Hill Plantation, showing the Living Lateral Branches although closely surrounded by Larch.



A Typical Oregon Pine in an Exposed Position, showing Injury to Leader and subsequent Natural Recovery.

GIMMERBURN PLANTATION RESERVE.

(Area, 425 acres; altitude, 1,200 ft.; commenced operations, 1903.)

Owing to the favourable season, the trees at this station have made very good growth, and at the present time are looking very healthy. Owing to the work of planting being abandoned, there has been no one employed except to plough up land for oats and destroy vermin. The cost of breaking up land, &c., has been borne by the nursery. The land ploughed was sown down in oats, and a good crop was the result, as will be seen by the report on Eweburn Nursery.

The expenditure amounts to £5 for the year, and to date £2,621 0s. 5d.

Schedule II.—Statement of Expenditure.

	For Year. £	s.	d.	To Date. £	s.	d.
Planting operations and maintenance—						
Tree-planting	...			857	4	3
Pitting	...			29	9	0
Clearing	...			...		
Cartage of trees	...			97	10	9
General upkeep of plantation	...			379	8	5
General repairs	...			9	13	5
Horse-feed	...			420	4	0
Permanent works—						
Fencing	...			387	11	2
Formation	...			50	0	0
Buildings	...			57	3	9
Stock, implements, &c.—Tools, implements	...			19	19	0
Supervision and clerical—						
Salaries—						
Supervision of free labour	5	0	0	233	0	0
Superintending Nurseryman's proportion and clerical assistance	...			79	16	8
	£5	0	0	£2,621	0	5

Schedule III.—Trees Account.

	Number.
Trees received during year	..
Less to replace blanks	..
Planted on new area	...
Previously planted	152,896
Total number planted on 173 acres (average age, seven years)	152,896

Schedule IV.—Property Account.

	£	s.	d.
Land (420 acres): Crown land not charged to Forestry Account	...		
Buildings	57	3	9
Live-stock	...		
Improvements	50	0	0
Fencing	387	11	2
Stores in hand	19	19	0
	£514	13	11

Balance-sheet.

	£	s.	d.
Total expenditure	2,621	0	5
Less Property Account	514	13	11
Cost of operations	£2,106	6	6
173 acres planted (average age, seven years).			
Estimated value of plantation per acre	£10	2	6

A. W. ROBERTS,
Nurseryman in Charge.

HANMER SPRING NURSERY, CANTERBURY.

(Area, 40 acres; altitude, 1,225 ft.; established, 1902.)

Rain fell on 139 days during the year, the total precipitation being 50·73 in. The maximum monthly fall of 14·87 in. was recorded during July. The highest shade-temperature (90°) was registered on the 20th February, and the lowest (15°) on the 4th August. Frosts were recorded on eighty-nine nights during the year, exceptionally low temperatures being registered during the months of July and August, which were easily the coldest and most boisterous months of the year, the heaviest snowfall on record for the last thirty years taking place during July. The snow lay on the ground for a period of six weeks, completely suspending outside operations for the time being. The rainfall throughout the year was very unevenly distributed, fairly moist conditions prevailing during autumn and winter, the spring being exceptionally wet and the summer a very dry one; so it may be concluded that the weather-conditions throughout the year were not altogether conducive to good results, and adverse conditions had to be contended with. With careful management, however, very satisfactory results were obtained in the seed-beds, the crop of seedlings being an exceptionally fine one. In spite of the dry summer, the growth made by all lined-out stock has been very satisfactory.

Seedling Trees.

Seed-sowing was conducted under somewhat unfavourable conditions as regards weather, heavy winds greatly interfering with the sowing operations. The soil was, however, in fine condition, and the resulting crop of seedlings showed that there was nothing more to be desired in this respect. Though the grass-grub made its appearance in grass land and pastures in many places about the district, notably the Spa grounds and in many gardens in the township, there is no sign of the pest in any part of the nursery. Their absence from the seed-beds may be put down to the constant and thorough working of the ground for the twelve months previous to seed-sowing, and thus keeping the soil free of all growth that would be likely to afford food for the grubs; to a judicious sowing of apterite in the beds during seed-sowing operations and to a periodical thorough soaking of the beds during the growing season, thus practically drowning out any grubs that may have hatched out. Their absence among lined-out stock may mainly be attributed to constant, deep, and thorough cultivation of the vacant areas during the twelve months of their fallow prior to transplanting operations. The total number of seedlings raised during the year is 1,587,100, valued at £1,608 2s., the total number raised to date being 9,760,975.

Larix europaea.—From 120 lb. of seed sown, a crop of 900,000 sturdy plants was raised, a very big advance on the previous season's production, though 48 lb. less seed was sown.

Pinus Laricio.—A good sturdy crop of 300,000 young plants was raised from 74 lb. of seed.

P. ponderosa.—A total of 200,000 young trees was raised from 30 lb. of seed, the plants being very sturdy and well grown.

P. Benthamiana.—From the 10 lb. of seeds sown 8,000 trees resulted, the crop being a sturdy one.

P. radiata—A very fine crop of 30,000 young trees was raised from 4 lb. of seed, young plants showing an average vertical growth of 6 in.

P. Torreyana.—A small experimental sowing of 1 lb. of seed produced 200 very sturdy plants.

Pseudo-tsuga taxifolia.—The germination was exceptionally good, and the plants are sturdy, about 80,000 young trees being raised from 10 lb. of seed.

Alnus glutinosa.—This seed was collected from trees growing on the plantation adjoining the nursery, about 2 lb. of seed being sown, and resulting in a very fine crop of 60,000 plants.

Sequoia sempervirens.—About 1,000 sturdy plants were raised from ½ lb. of seed.

Sequoia gigantea.—From ¼ lb. of seed a total of 4,500 strong trees was raised.

Cotoneaster Simmondsii.—This seed was collected from a hedge recently planted on the nursery, a crop of 3,400 well-grown plants being raised from about 5 lb. of seed.

Two-year-old Seedlings.

Pinus Laricio.—Owing to wet weather greatly retarding lining-out operations, it was quite impossible to deal with all the seedlings, so it was necessary to leave three of the seed-beds for a further season. The plants have made excellent growth, and are very sturdy.

Two-year-old Lined-out Trees.

The work of lining-out was carried out under very adverse conditions, both as regards weather and soil. Though the whole of the ground was subsoiled during early winter, the heavy snowfall had a very detrimental effect, as it lay on the ground for about six weeks, consolidating the soil to such an extent that considerable extra labour was entailed in bringing it to a proper condition for successful tree-planting. The very moist conditions prevailing throughout the spring also greatly retarded operations, thus considerably reducing the output of trees to the nursery lines. Dry weather followed in the late spring, and continued throughout the summer months. Stock did not suffer to any great extent, however, the hoe being kept going continually between the trees, thus tending to the formation of a "soil mulch," which greatly reduced surface evaporation. The percentage of deaths throughout could be put down at from 8 to 10 per cent.

Larix europaea.—This crop has not attained the vertical growth of previous years, but the plants are sturdy and well rooted. The percentage of loss from transplanting was small, and the grass-grub has not made its appearance as in previous years. A form of needle-cast made its appearance during late spring, caused probably by the previous moist conditions, the lower branches of the trees suffering partial defoliation. The crop soon recovered, however, after drier conditions set in.

Pinus Laricio.—This crop has suffered a fair percentage of loss from transplantation, owing to dry weather immediately following. The trees throughout have not made great vertical growth, but are sturdy and healthy looking.

Pinus ponderosa.—This variety also suffered a fair percentage of loss from the dry weather immediately following the planting season. The young plants have, however, made fine growth, and should make excellent stock by the following season.

Pinus Benthamiana.—Though sturdy plants, this variety has not made the vertical growth of the preceding species; the percentage of deaths is about the same.

Pinus radiata.—This crop proved a failure, only 2,000 plants remaining out of total of 6,000 lined out. When removed from the seed-beds the plants were very weak, having been under snow for some weeks. The majority of the plants had rotted completely, the weight of snow having pressed them flat on the ground. Only a few were fit for transplanting.

Pinus muricata.—These plants were also weak from being under the snow for so long a period, some 5,000 deaths occurring among the 20,000 plants lined out. The survivors have made excellent growth, however.

Pseudo-tsuga taxifolia.—A fair percentage of loss is noticeable amongst these trees also; the plants have, however, made very good growth.

Alnus glutinosa.—These have made remarkably fine growth, the percentage of deaths being practically nil. All the trees are sufficiently well forward for transfer to plantations during the coming season.

On the whole, the operation of lining-out was productive of very fair results, considering the adverse conditions under which the work was carried out, the percentage of deaths being not much above that of previous years. A total of 931,400 trees were dealt with, at an average cost of 1s. 9d. per thousand. The operation was commenced during the last week in August, and was completed on the 19th of October.

Three-year-old Trees.

Larix europaea.—These trees were lifted for transfer to plantations during the winter, but as sufficient pits were not available, it was necessary to line them out again. There have been practically no deaths, and the plants have made excellent growth, and are strong and sturdy. The remarks *re* needle-cast among two-year-olds also apply in this case.

Pinus Laricio.—About 170,000 of these were transplanted from the two-year-old seed-beds, and having done very well, though not making such sturdy growth as those planted at one year old; the percentage of deaths could be put down at 1 per cent. The seed was badly mixed with its variety, *P. austriaca,* as fully 50 per cent. of the break is the latter species. The sorting-out of one variety from another when lifting entails much additional labour, which would be quite unnecessary were pure seed supplied. The whole of this block of trees will be transferred to the plantations during the coming season.

P. ponderosa.—This is the finest yet grown at this station, the trees throughout having made remarkably fine and even growth, the whole crop being fit for transfer to plantations.

P. Benthamiana.—These have made but poor vertical growth, but are strong and sturdy.

P. radiata.—A few of these trees were left over from last season, being too small for transfer to plantations, and were lined out during the spring. The plants are now well grown.

P. muricata.—A small number of this variety was also left from last season, the plants being lined out during the spring; they are now strong trees.

P. austriaca.—These trees have made very sturdy growth.

Pseudo-tsuga taxifolia.—The whole of this variety were lifted for transfer last winter, but the pits not being available, the young plants were again lined out during the spring. The growth made is very satisfactory, and about 12,000 young trees will be available for transfer this winter.

Picea sitchensis.—The majority of these have made excellent growth.

Chamaecyparis Lawsoniana.—A very sturdy crop, and quite fit for transfer to plantations.

Taking the nursery throughout, the average tree-growth is above that of previous years, and the trees have never presented a better or more healthy appearance. It is anticipated that the output for the coming season will be about 1,000,000 trees. The total number of trees in stock on the 31st March was 3,187,100, valued at £5,341 17s.; the number of seedlings raised during the year was 1,587,100, valued at £1,608 2s.: making a total of 9,760,975 seedlings raised to date. Trees to the number of 741,090 were transferred to plantations and Domain Boards during the year, details of which are shown on Schedule V.

General.

Horse-feed.—To provide feed for the teams, about 20 acres was put down in oats during the autumn. The yield of about 20 tons of sheaves was about the average, and should provide sufficient chaff to tide over the winter months. To provide chaff for the ensuing season an area of 20 acres was broken up for the first time, to lie fallow for the winter months, and will be put down in oats during early spring.

The clover and hay crop was a fair one, and will provide ample fodder for use during the winter. The carrot-crop is not up to the average of former years, the roots having made but little growth owing to the dryness of the summer.

Buildings and Improvements.—A small wood-shed was attached to the men's quarters at the nursery; for the convenience of storing chaff-sacks, &c., a substantial bin was constructed in a portion of the shed adjoining the stables. A necessary extension was made to the implement-sheds, and there is now ample accommodation for all implements and vehicles. The concreting of the floors of the implement-shed and workshop was a much-needed improvement.

Nursery-formation.—Necessary work in the form of draining low-lying areas, levelling and formation of roads, was carried out.

Fencing.—About 40 chains of fencing was erected to enclose an additional horse-paddock.

Water-supply.—The existing water-supply continues to give satisfaction at the nursery; the extension of the supply to the stables and dwelling is, however, very desirable.

A considerable amount of work was necessary in the way of maintenance, which consisted of repainting buildings and gates, &c., upkeep of harness and implements, general repair works, shoeing, attention to ornamental borders, reshingling roads, and maintenance of general neatness about workshops, stables, and implement-sheds.

For manurial purposes, and to generally benefit the soil, all vacant areas were sown half with crimson clover and half with oats, the crops being ploughed in when 6 in. high. As the soil was beginnig to cake badly, the above method should be of great benefit in tending to keep the soil more open.

No damage has been done by hares or rabbits during the year.

The daily average of men employed throughout the year is 6·27

Schedule I.

Month.	Rainfall.	Number of Days Rain fell.	Temperature.		Number of Days Frosts occurred.
			Maximum.	Minimum.	
1912.	In.		Deg. Fahr.	Deg. Fahr.	
April	5·56	10	74	30	5
May	2·03	10	66	21	13
June	2·92	16	62	21	18
July	14·87	20	59	21	22
August	0·94	6	62	15	23
September	4·59	21	65	28	4
October	4·42	13	73	29	3
November	4·88	14	73	35	..
December	1·77	7	85	35	..
1913.					
January	3·55	10	84	35	..
February	3·64	6	90	32	1
March	1·56	6	83	35	..
Totals	50·73	139	..	..	89

Schedule II.—Statement of Expenditure.

	For Year.			To Date.		
	£	s.	d.	£	s.	d.
Tree-planting and maintenance—						
Tree-growing	577	6	9	4,777	3	9
General maintenance and repairs ...	152	7	9	716	17	6
Tree-seeds	73	11	6	625	11	11
Manures	20	13	1	84	13	8
Horse-feed, purchased and grown ...	109	19	6	600	4	8
Miscellaneous works	37	13	0	212	11	4
Stock and material—Tools, implements ...	34	0	4	574	10	11
Permanent works—						
Buildings	11	4	6	1,068	3	9
Nursery-formation	54	8	6	526	10	9
Fencing	7	2	0	89	11	9
Water-supply	...			448	12	4
Supervision and clerical—						
Proportion of Superintending Nurseryman's salary	35	0	0	186	0	0
Proportion of Nurseryman's salary ...	112	0	6	806	1	10
Clerical assistance	13	0	0	63	0	0
	£1,238	7	5	£10,779	14	2

Schedule III.—Trees Account.

—	During the Year.		Since 1896 to Date.		Estimated Value, as Schedule V.
	Number.	Cost of Raising.	Number.	Cost of Raising and Maintenance.	
		£ s. d.		£ s. d.	£ s. d.
Trees raised	1,587,100	150 7 2	9,760,975	10,779 14 2	..
Trees sent out	741,090	..	6,573,875	..	..
Balance in stock			3,187,100	.. ..	5,341 17 0
Value of land, improvements, and stock (Property Account)				.. ..	2,968 10 7
Total value					8,310 7 7

Schedule IV.—Property Account.

		£	s.	d.
Land (40 acres):	Crown land not charged to Forestry Account	...		
Buildings		1,068	3	9
Live-stock		124	0	0
Improvements		975	3	1
Fencing		89	11	9
Stores in hand		711	12	0
		£2,968	10	7

Schedule V.—Details of One-year-old Trees, sown 1912–13.

Name of Tree.	Number in Seed-beds.	Height, in Inches.	Seed sown.	Value per Thousand.			Total Value.			Remarks.
			lb.	£	s.	d.	£	s.	d.	
Larix europaea	900,000	5	120	1	0	0	900	0	0	Very fine crop.
Pinus Laricio	300,000	2	74	1	0	0	300	0	0	Good crop.
„ ponderosa	200,000	2	30	1	0	0	200	0	0	„
„ Benthamiana	8,000	3	10	1	5	0	10	0	0	Poor germination.
„ radiata	30,000	6	4	1	0	0	30	0	0	Very fine crop.
„ Torreyana	200	4	1	1	5	0	0	5	0	Sturdy trees.
Pseudo-tsuga taxifolia	80,000	2	10	1	5	0	100	0	0	Very fine crop.
Alnus glutinosa	60,000	6	2	0	15	0	45	0	0	„
Sequoia sempervirens	1,000	3	0½	4	0	0	4	0	0	Sturdy trees.
„ gigantea	4,500	3	0¼	4	0	0	18	0	0	Good crop.
Cotoneaster Simonsii	3,400	5	5	0	5	0	0	17	0	„
Totals	1,587,100	..	..	..			1,608	2	0	

Two-year-old Trees, sown 1911–12.

Name of Tree.	Number in Seed-beds.	Number in Nursery-lines.	Height, in Inches.	Value per Thousand.			Total Value.			Remarks.
				£	s.	d.	£	s.	d.	
Larix europaea	..	96,000	14	2	5	0	216	0	0	Very fine crop.
Pinus Laricio	..	300,000	3	2	5	0	675	0	0	Sturdy trees.
„ „	300,000	..	3	1	5	0	375	0	0	„
„ ponderosa	..	80,000	4	2	5	0	180	0	0	Fine crop.
„ Benthamiana	..	7,000	4	2	10	0	17	10	0	„
„ radiata	..	2,000	8	2	5	0	4	10	0	Medium plants.
„ muricata	..	15,000	8	2	5	0	33	15	0	Fair take.
Pseudo-tsuga taxifolia	..	4,000	6	2	10	0	10	0	0	Good plants.
Alnus glutinosa	..	89,000	24	1	0	0	89	0	0	Very fine crop.
Totals	300,000	593,000	..	..			1,600	15	0	
	893,000									

Three-year-old Trees, sown 1910–11.

Name of Tree.	Number in Nursery-lines.	Height, in Inches.	Value per Thousand.			Total Value.			Remarks.
			£	s.	d.	£	s.	d.	
Larix europaea	100,000	24	3	0	0	300	0	0	Very sturdy trees.
Pinus Laricio	490,000	10	3	0	0	1,470	0	0	„
„ ponderosa	80,000	10	3	0	0	240	0	0	Very fine trees.
„ Benthamiana	7,000	8	3	5	0	22	15	0	Sturdy trees.
„ radiata	2,400	12	3	0	0	7	4	0	„
„ muricata	400	12	3	0	0	1	4	0	„
„ austriaca	1,400	10	3	0	0	4	4	0	„
Pseudo-tsuga taxifolia	12,000	12	3	5	0	39	0	0	„
Picea sitchensis	10,000	11	3	5	0	32	10	0	„
Chamaecyparis Lawsoniana	3,800	14	4	5	0	16	3	0	„
Totals	707,000	..	..			2,133	0	0	

Trees transferred from Nursery to Plantation, &c., 1912–13.

Where sent.	Name of Tree.	Number.	Height, in Inches.	Value per Thousand.	Total Value.	Remarks.
		£		£ s. d.	£ s. d.	
Hanmer Springs Plantation	Larix europaea ..	434,000	18	2 5 0	976 10 0	Sturdy plants.
	Pinus Laricio	208,740	10	3 0 0	626 4 4	
	„ ponderosa ..	49,000	10	3 0 0	147 0 0	
	„ radiata	6,575	12	2 5 0	14 15 10	
	„ muricata ..	1,025	10	2 5 0	2 6 1	
	Alnus glutinosa ..	12,900	6	0 15 0	9 13 6	
		712,240	..	..	1,776 9 9	
Selwyn Plantation Board	Pinus Laricio	17,000	10	3 0 0	51 0 0	
	„ ponderosa ..	9,000	10	3 0 0	27 0 0	
	„ radiata	650	12	2 5 0	1 9 3	
		26,650	..	..	79 9 3	
Omaka Domain Board	Larix europaea ..	1,000	18	2 5 0	2 5 0	
	Pinus Laricio	500	10	3 0 0	1 10 0	
	„ ponderosa ..	200	10	3 0 0	0 12 0	
	Pseudo-tsuga taxifolia ..	500	12	2 10 0	1 5 0	
		2,200	..	..	5 12 0	
Hanmer Springs Plantation	As per details above ..	712,240	..	..	1,776 9 9	
Selwyn Plantation Board	„ ..	26,650	..	..	79 9 3	
Omaka Domain Board	„ ..	2,200	..	..	5 12 0	
Totals ..	..	741,090	..	..	1,861 11 0	

W. G. MORRISON,
Nurseryman in Charge.

HANMER SPRINGS PLANTATION, CANTERBURY.

(Area, 3,668 acres; altitude, 1,225 ft.; commenced operations, 1901.)

Operations have again been conducted under extremely adverse conditions, chiefly climatic. The winter was a phenomenally severe one, and unprecedented in this district. For seven weeks during the months of July and August work on the ground was completely suspended, free labour only being employed at pruning, the greater part of the larch areas on both Nos. I and II plantations being gone over in this respect. Whilst the snow was deep hare drives were organized, no less than eighty hares being destroyed in two days. The early part of the spring was very moist; but the summer, on the other hand, was a very dry one, and to this may be attributed the rather heavy death-rate among newly planted trees. The deaths are most numerous among pines which were planted in dry gravelly situations devoid of any growth to prevent evaporation. *Pinus Laricio* is the chief sufferer, the deaths in this species amounting to about 30 per cent. Larch have also suffered somewhat, but not so badly as Corsican pine, the loss being about 12 per cent. Among *Pinus ponderosa* the death-rate could be put down at about 9 per cent.

Spring frosts did some damage to the leaders of larch just as the growth was starting, but they soon recovered. A form of needle-cast made its appearance among this species early in the season, caused no doubt by dry weather-conditions following so soon after a very wet winter and spring. The lower branches of the trees only were affected, the leaders being untouched; the defoliation being more marked on trees growing on the flat country than among those on the sidelings; in fact, on the greater part of the sidelings there was no sign of the needle-cast. The trees appeared to shake off the disease towards the end of summer, and took on to some extent their usual healthy appearance. With this one exception all varieties of trees present a flourishing appearance, and the average growth compares well with that of other seasons.

Pinus Laricio has again demonstrated itself as well adapted for this locality, the average annual growth being from 10 in. to 20 in. *Pinus ponderosa* has also thrived well, and in one instance where it was mixed with *P. austriaca* about eight years ago it is now fully 7 ft. above the latter. The Oregon pine, which in previous years has been rather slow in growing, has asserted itself this season, and has put on a vertical growth of from 6 in. to 20 in.; it is evidently responding to the shelter afforded by the Corsican pine, with which it is mixed. Larch has not made the rapid growth of previous years, the dry season no doubt accounting for this. *Picea sitchensis* is still very slow in starting, but it is possible that it will go ahead when its admixture, *Pinus ponderosa*, gives it shelter. Alder has made its usual rapid growth; but spruce has made but little headway.

Operations were, as usual, carried on by a combination of free and prison labour, the larger portion being done by the latter, some difficulty being experienced in obtaining suitable free labour. Tree-planting was commenced on the 3rd May, and was completed on the 9th October. A total of 717,240 trees were planted, including 5,000 willow-cuttings; of this number, 664,415 were planted on new area, and 52,825 were used for replacing failures in former plantings, mainly on No. I plantation. Only a small portion of No. II plantation was dealt with in regard to the replanting of failures, as time and labour could not be found for the purpose. It is, however, intended to have this work put through during the coming season.

The area planted during the past season is 244 acres, making a total area of 1,964 acres now under forest, containing 5,346,871 trees. A further area of 1,060 acres was acquired for afforestation purposes. Of this block, an area of about 350 acres was securely enclosed by a substantial netting fence, 182 chains in length, which was erected by contract at a labour-cost of 4s. per chain.

The greater part of the enclosed area was covered by a thick growth of manuka, which had to be cut down and burned before pitting operations could be commenced. This work was entirely performed by prison labour, an excellent job being made of it. Before the commencement of pitting fire-breaks and roads were marked off, a chain-wide fire-break cutting the area in halves, and a half-chain break following the fence-line, the roads following the fire-breaks where convenient. A paddock of 20 acres was reserved for cropping purposes; this was ploughed, and will be allowed to fallow before the winter.

Red deer again made their appearance in the planted areas during the winter, and did a good deal of damage to larch. One was shot inside the enclosure. The growth of manuka and tussock, which encumbered each side of the main road bordering the plantations and was such a menace as regards fire, was cleared and burned, thus enabling the ploughing of fire-lines right up to water-tables of road. Culverts have been formed where required, and the formation of necessary roads was carried on in various parts of the plantation. Pits to the number of 358,487 are now available for the season's planting.

Prison Labour.—The bulk of the work has been done by prison labour. The number of prisoners available for forestry operations has exceeded that of other years, the daily average employed being 15·22 men. The total value of work done for the year was £1,127 0s. 10d. The thanks of the Department are due to the Prisons staff for their efforts in making the work a success. The following are the values and particulars in brief of the work for the year: Pitting, 483,033, £362 5s. 6d.; tree-planting, 643,865, £334 14s. 5d.; clearing, 290 acres, £290 19s. 5d.; general upkeep, £41 16s.; horse-feed, £5 11s. 3d.; fencing, £13 10s.; formation, £78 14s. 3d.

Free Labour.—Free labour was employed partly by contract and partly by day labour, the daily average employed throughout the year being 5·35 men. A total of 109,650 pits were opened for the year, at a cost of 19s. per thousand, the whole of the work being done by contract. Trees to the number of 21,225 were planted by contract, at a total cost of £7 19s. 3d. Cartage of trees to plantations cost £10 14s. 3d. An area of 13 acres was cleared of scrub, at a cost of £13 19s. 6d. General maintenance work was a large item of expenditure during the year, the total labour-cost being £459 17s. 4d. Under this expenditure are included the following works: Opening blank pits and replanting failures; grubbing out briars, gorse, &c.; cleaning foreign growth from around young trees; pruning and cutting-out of double leaders, almost the whole of the larch area being gone over in this respect; destroying hares; ploughing fifteen miles of fire-breaks.

Part of the formation of roads was also done by free labour. A total length of 182 chains of fencing was erected, at a cost of 4s. per chain. An expenditure of £12 19s. 6d. was also incurred in harvesting operations, ploughing ground for oat-crop, and carting chaff from Culverden.

Schedule II.—Statement of Expenditure.

	For Year.			To Date.		
	£	s.	d.	£	s.	d.
Planting operations and maintenance—						
Tree-planting	342	13	8	3,057	11	8
Pitting	466	2	8	4,493	9	7
Clearing	304	18	11	1,617	6	9
Cartage of trees	10	14	3	89	11	4
General upkeep of plantation	501	13	4	2,972	6	2
General repairs	3	1	6	17	13	10
Horse-feed	19	10	5	173	18	5
Permanent works—						
Fencing	193	3	5	1,316	18	8
Formation	124	2	2	1,209	10	8
Buildings	1	11	5	750	11	1
Stock, implements, &c.—Tools, implements	51	14	2	466	4	8
Supervision and clerical—						
Salaries—						
Supervision of free labour	90	0	0	866	14	4
,, prison labour	171	0	6	603	17	2
Superintending Nurseryman's proportion and clerical assistance	46	0	0	418	7	0
	£2,326	6	5	£18,054	1	4
Estimated value of prison labour (apportioned in above items)	£1,127	0	10	£6,381	4	8
Actual expenditure	£1,199	5	7	£11,672	16	8

Schedule III.—Trees Account.

	Number.
Trees received during year (including 5,000 willow-cuttings) ...	717,240
Less to replace blanks	52,825
	664,415
Planted on new area...	664,415
Previously planted	4,682,456
Total number planted on 1,964 acres (average age, eight years)	...5,346,871

Schedule IV.—Property Account.

	£	s.	d.
Land (2,668 acres): Crown land not charged to Forestry Account	...		
Buildings	750	11	1
Live-stock	...		
Improvements	1,209	10	8
Fencing	1,316	18	8
Stores in hand	142	17	0
	£3,419	17	5

Balance-sheet.

	£	s.	d.
Total expenditure (prison labour included)	18,054	1	4
Less Property Account	3,419	17	5
Cost of operations ... ... ,...	£14,634	3	11
1,964 acres planted (average age, eight years).			
Estimated value of plantation per acre	11	2	6

A. J. BOYDELL,
Plantation Foreman.

W. G. MORRISON,
Nurseryman in Charge.

DUMGREE PLANTATION, MARLBOROUGH.

(Area, 881 acres; altitude, 100 ft.; commenced operations, 1903.)

To ascertain the feasibility of converting the unplanted portion of this reserve into a revenue-producing property a visit was made to the plantation in February last, in the company of Ranger Townsend, and the required information duly presented. This opportunity was also availed of to determine the condition of tree-growth generally.

While a steady uniform progress in all varieties of trees was noticeable over the level ground, exceedingly vigorous headway is being made by *Pinus ponderosa, Pinus Laricio*, and *Larix europaea* on the terraces, where "leaders" from 30 in. to 36 in. are conspicuous. The conditions are evidently also suitable for *Pinus strobus*, which is progressing at the rate of about 15 in. annually. Amongst the other varieties of succeeding trees may be mentioned *Pinus radiata, Pinus muricata, Betula alba, Populus* (varieties), and *Alnus glutinosa*, and in a smaller measure *Pseudotsuga taxifolia*. It is not contrary to fact to say that the established pines at this abandoned station are increasing their height more rapidly than on any of the South Island plantations.

Anticipations of the damage by fire have been realized, although the benefits accruing from the pruning scheme outlined two years ago are now very obvious. The ascertaining of a perfectly incontestible statement of the number of trees existing over the area originally planted would be almost impossible; but, basing calculations on the number planted, and making special allowance for deaths by various causes, the total number of trees living reaches 569,640, as per details on general statement.

Constable Williams has evidently fulfilled his promise faithfully to exercise constant watchfulness over the plantation in return for the sheep-grazing privilege, and it is gratifying to know that, although grass fires occurred in the immediate vicinity on several occasions, the young plantation escaped injury from this source. Undoubtedly the presence of sheep on the reserve had the desired effect of restraining cocksfoot-grass growth from reaching the seeding-stage, and thus minimize the danger of any rapid spread of fire should such have gained access to the enclosure.

A small expenditure of £5 3s. (being principally devoted to rabbiting) has advanced the actual total expenditure to £10,054 16s. 10d., but by including the value of prison labour this figure is increased by £2,365 14s. 7d., as detailed on supporting statements.

Schedule II.—Statement of Expenditure.

	For Year.			To Date.		
	£	s.	d.	£	s.	d.
Planting operations and maintenance—						
Tree-planting	...			1,777	10	7
Pitting	...			3,898	11	1
Clearing	...			13	5	0
Cartage of trees	...			73	10	6
General upkeep of plantation	3	3	0	1,509	2	4
General repairs	...			23	17	8
Horse-feed	...			...		
Acquirement of land	...			3,600	0	0
Permanent works—						
Fencing	...			122	17	10
Formation	...			158	5	7
Buildings	...			41	2	8
Stock, implements, &c.—Tools, implements	...			276	3	2
Supervision and clerical—						
Salaries—						
Supervision of free labour	...			347	14	9
,, prison labour	...			467	16	3
Superintending Nurseryman's proportion and clerical assistance	2	0	0	110	14	0
	£5	3	0	£12,420	11	5
Estimated value of prison labour (apportioned in above items)	...			2,365	14	7
Actual expenditure	£5	3	0	£10,054	16	10

Schedule III.—Trees Account.

	Number.
Trees received during year	...
Less to replace blanks	...
Planted on new area	...
Previously planted	569,640
Total number planted on 209 acres (average age, seven years)	569,640

Schedule IV.—Property Account.

	£	s.	d.
Land (857½ acres)	3,600	0	0
Buildings	...		
Live-stock	..		
Improvements	158	7	7
Fencing	122	17	10
Stores in hand	1	4	11
	£3,882	10	4

Balance-sheet.

	£	s.	d.
Total expenditure (prison labour included)	12,420	11	5
Less Property Account	3,882	10	4
Cost of operations	£8,538	1	1
209 acres planted (average age, six years)	...		
Estimated value of plantation per acre	£10	12	6

R. G. Robinson,
Superintending Nurseryman.

Approximate Cost of Paper.—Preparation, not given; printing (1,500 copies, including plans and illustrations), £120.

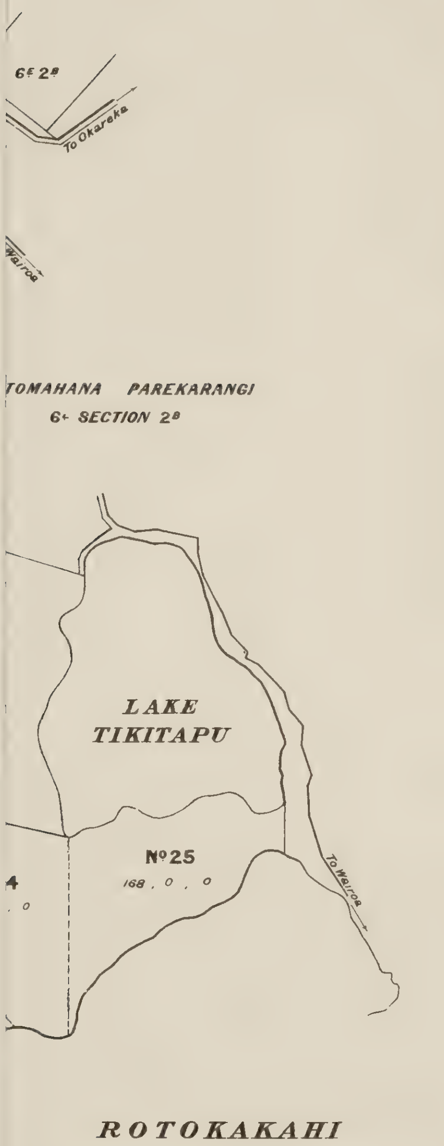
By Authority: John Mackay, Government Printer, Wellington.—1918.

Price 2s.]

AREWAREWA PLANTATION.

CE.

.	- *shown thus*	🟧
"	- *shown thus*	🟦
.	- *shown thus*	🟨
ous trees	- *shown thus*	🟫



ACREAGE, 9,744 ACRES.

	A.	R.	P.		A.	R.	P.
No. 10	530	0	0	No. 19	699	2	0
" 11	60	2	0	" 20	302	2	0
" 12	640	0	0	" 21	679	3	0
" 13	232	2	0	" 22	872	0	0
" 14	478	1	0	" 23	482	0	0
" 15	422	1	0	" 24	213	0	0
" 16	658	2	0	" 25	168	0	0
" 17	380	0	0	" 26	177	0	0
" 18	858	0	0				

ellaneous, 623 acres 1 rood.

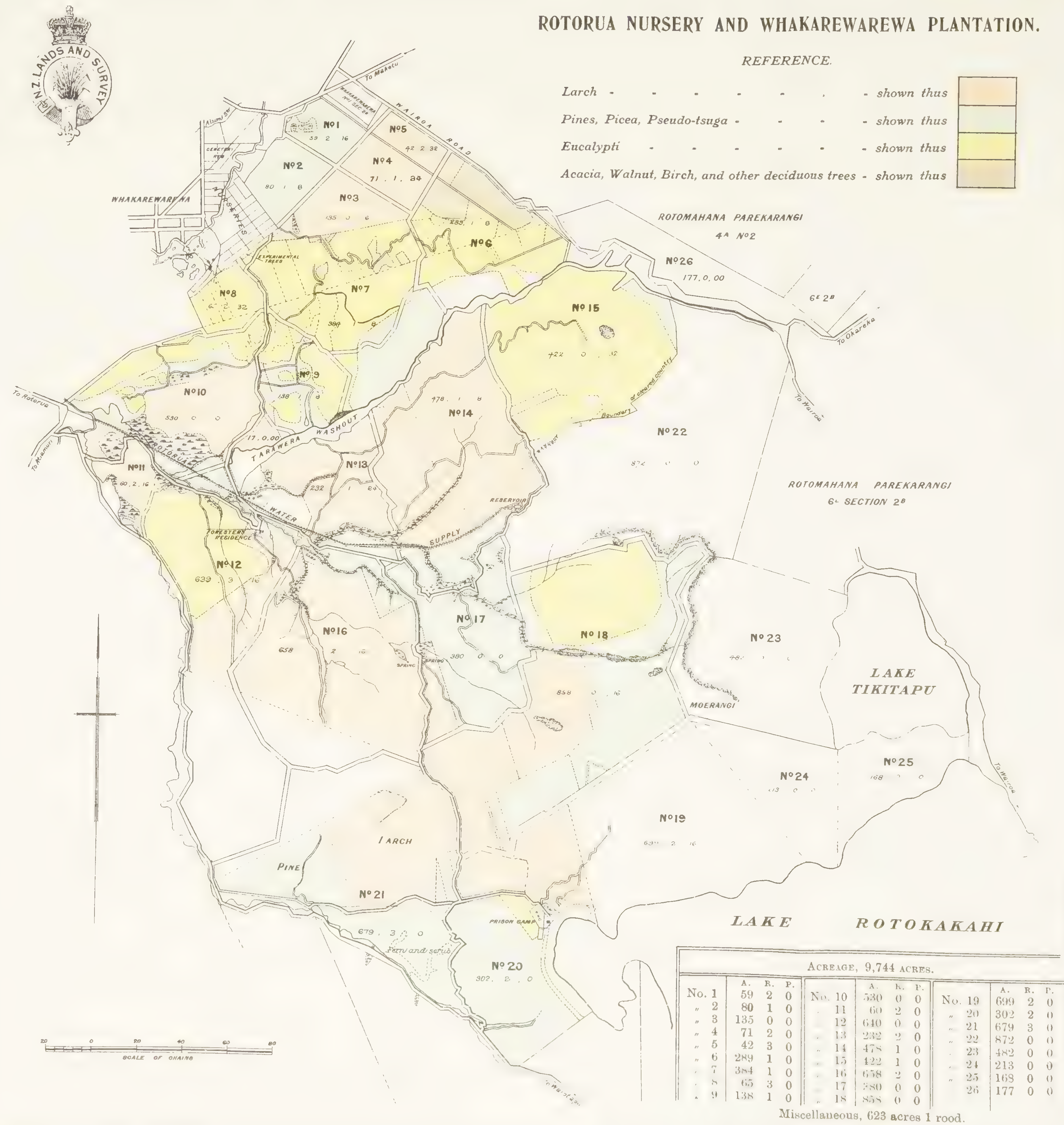
EF DRAUGHTSMAN, HEAD OFFICE, WELLINGTON.

1500-7.13-

ROTORUA NURSERY AND WHAKAREWAREWA PLANTATION.

REFERENCE.

Larch	shown thus	▨
Pines, Picea, Pseudo-tsuga	shown thus	▨
Eucalypti	shown thus	▨
Acacia, Walnut, Birch, and other deciduous trees	shown thus	▨



Acreage, 9,744 acres.

	A.	R.	P.		A.	R.	P.		A.	R.	P.
No. 1	59	2	0	No. 10	530	0	0	No. 19	699	2	0
" 2	80	1	0	" 11	60	2	0	" 20	302	2	0
" 3	135	0	0	" 12	640	0	0	" 21	679	3	0
" 4	71	2	0	" 13	232	2	0	" 22	872	0	0
" 5	42	3	0	" 14	478	1	0	" 23	482	0	0
" 6	289	1	0	" 15	422	1	0	" 24	213	0	0
" 7	384	1	0	" 16	658	2	0	" 25	168	0	0
" 8	65	3	0	" 17	380	0	0	" 26	177	0	0
" 9	138	1	0	" 18	858	0	0				

Miscellaneous, 623 acres 1 rood.

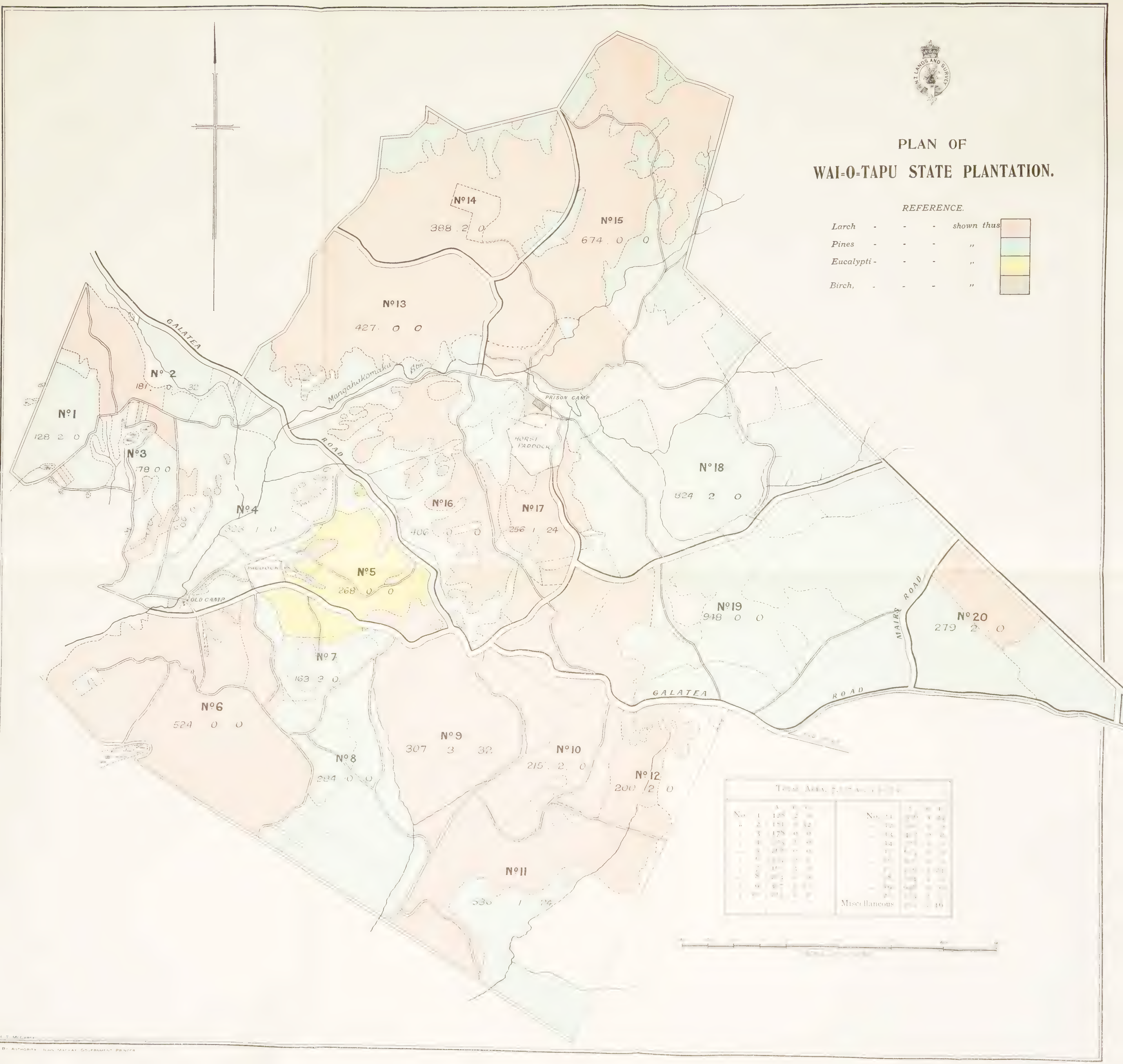
E.S. Wood Delt. 1911

H T McCardell Chief Draughtsman Head Office Wellington

1500.7.13 528

By Authority John Mackay Government Printer

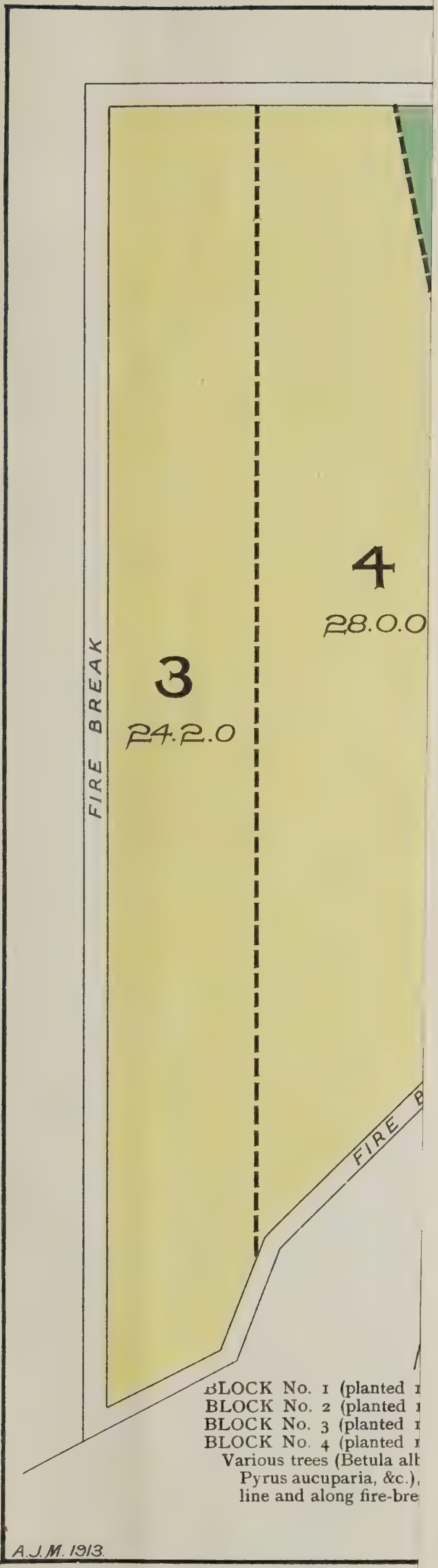
PLAN OF
WAI-O-TAPU STATE PLANTATION.



Total Area, [illegible]

		A.	R.	P.		A.	R.	P.
No.	1	128	2	0	No. 11	536	1	24
"	2	181	0	32	" 12	200	2	0
"	3	178	0	0	" 13	427	0	0
"	4	328	1	0	" 14	388	2	0
"	5	268	0	0	" 15	674	0	0
"	6	524	0	0	" 16	406	0	0
"	7	163	3	0	" 17	256	1	24
"	8	284	0	0	" 18	824	2	0
"	9	307	3	32	" 19	948	0	0
"	10	215	2	0	" 20	279	2	0
					Miscellaneous	[illegible]	[illegible]	16

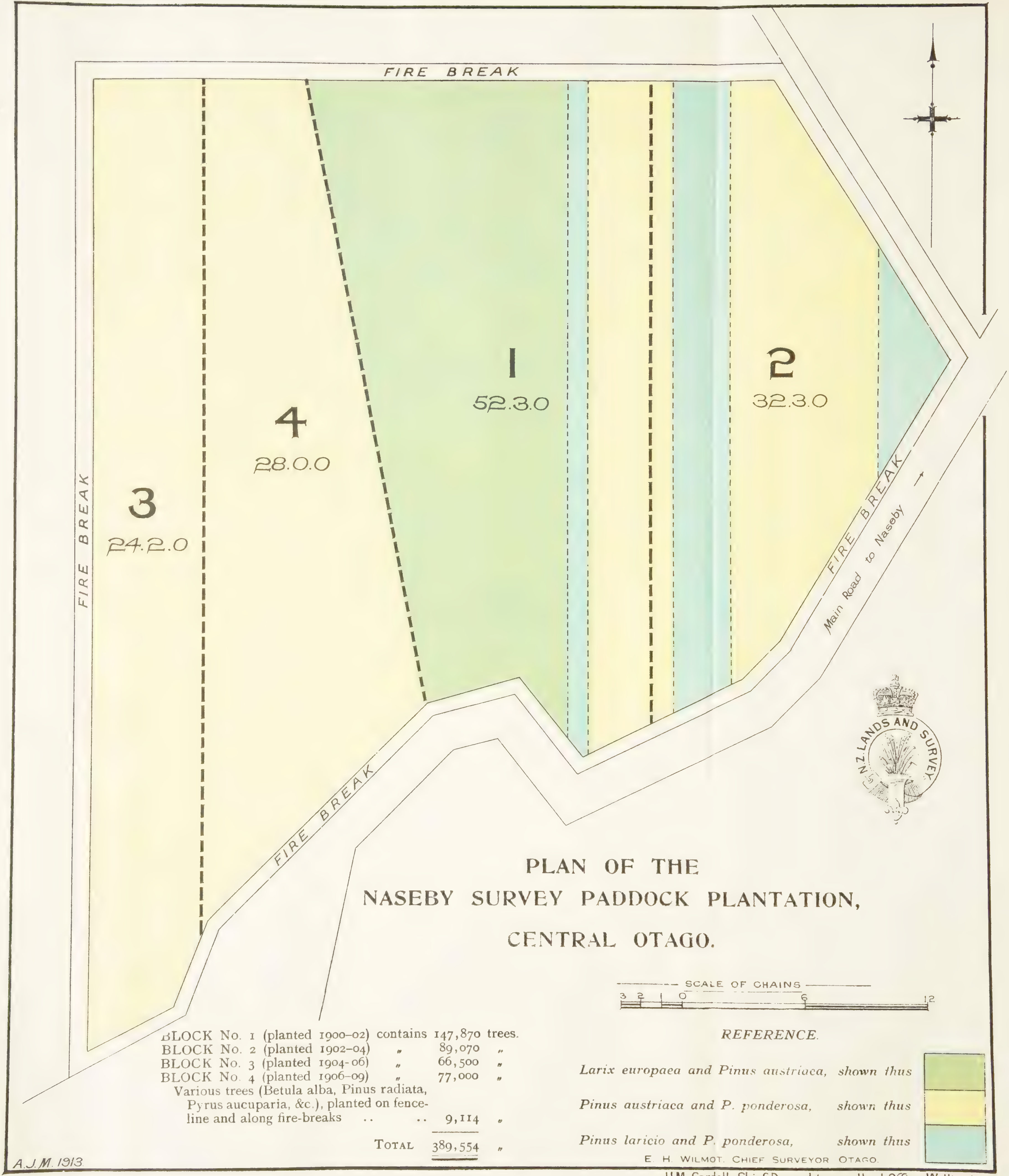
H. T. McCardell.
By Authority: John Mackay, Government Printer.



BLOCK No. 1 (planted
BLOCK No. 2 (planted
BLOCK No. 3 (planted
BLOCK No. 4 (planted
Various trees (Betula al
Pyrus aucuparia, &c.),
line and along fire-bre

A.J.M. 1913.

By Authority: John Mackay, Government Printer.



PLAN OF THE NASEBY SURVEY PADDOCK PLANTATION, CENTRAL OTAGO.

BLOCK No. 1 (planted 1900–02)	contains	147,870	trees.
BLOCK No. 2 (planted 1902–04)	„	89,070	„
BLOCK No. 3 (planted 1904–06)	„	66,500	„
BLOCK No. 4 (planted 1906–09)	„	77,000	„
Various trees (Betula alba, Pinus radiata, Pyrus aucuparia, &c.), planted on fence-line and along fire-breaks		9,114	„
TOTAL		389,554	„

REFERENCE.

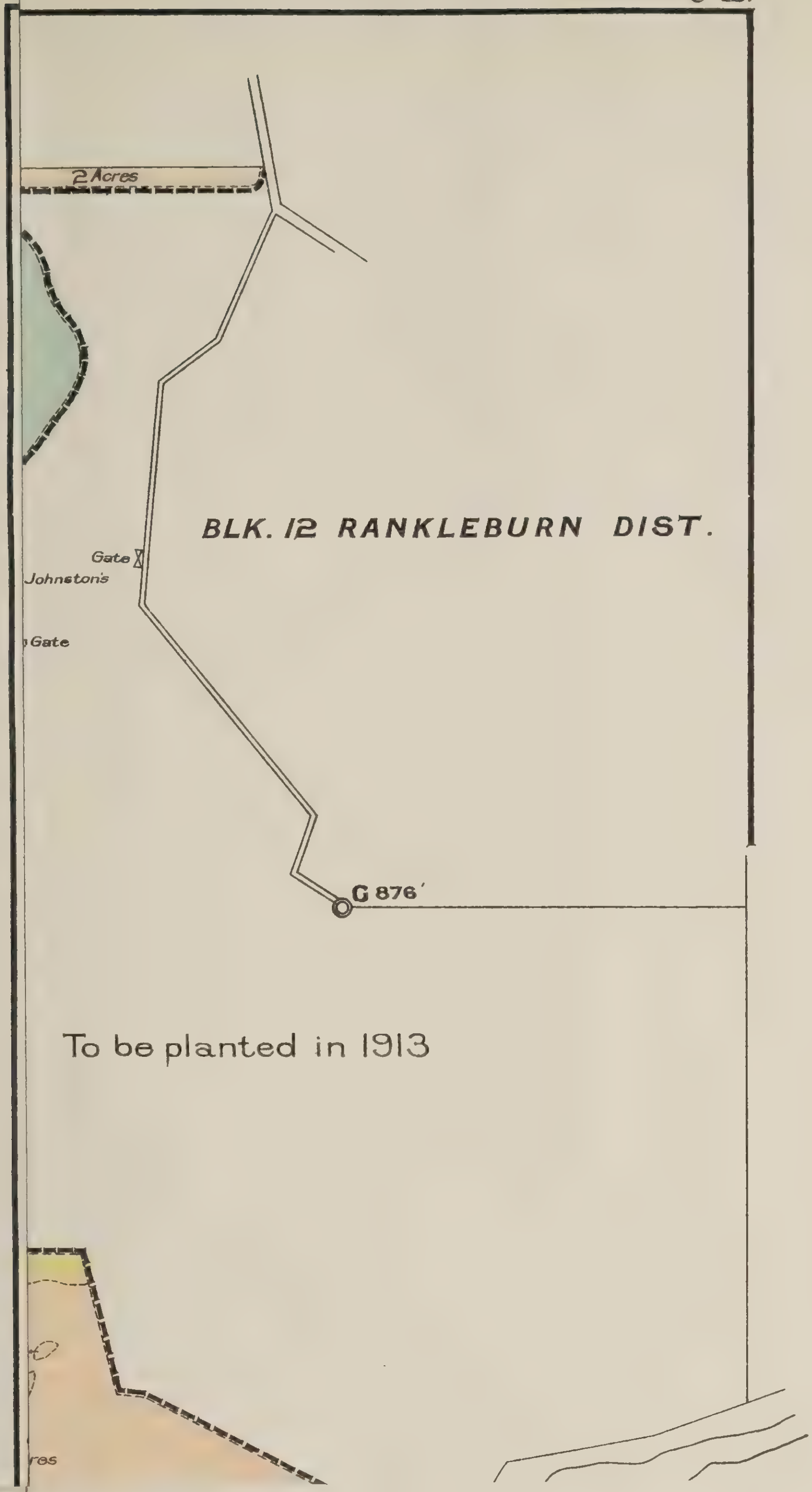
Larix europaea and Pinus austriaca,	*shown thus*	🟩
Pinus austriaca and P. ponderosa,	*shown thus*	🟨
Pinus laricio and P. ponderosa,	*shown thus*	🟦

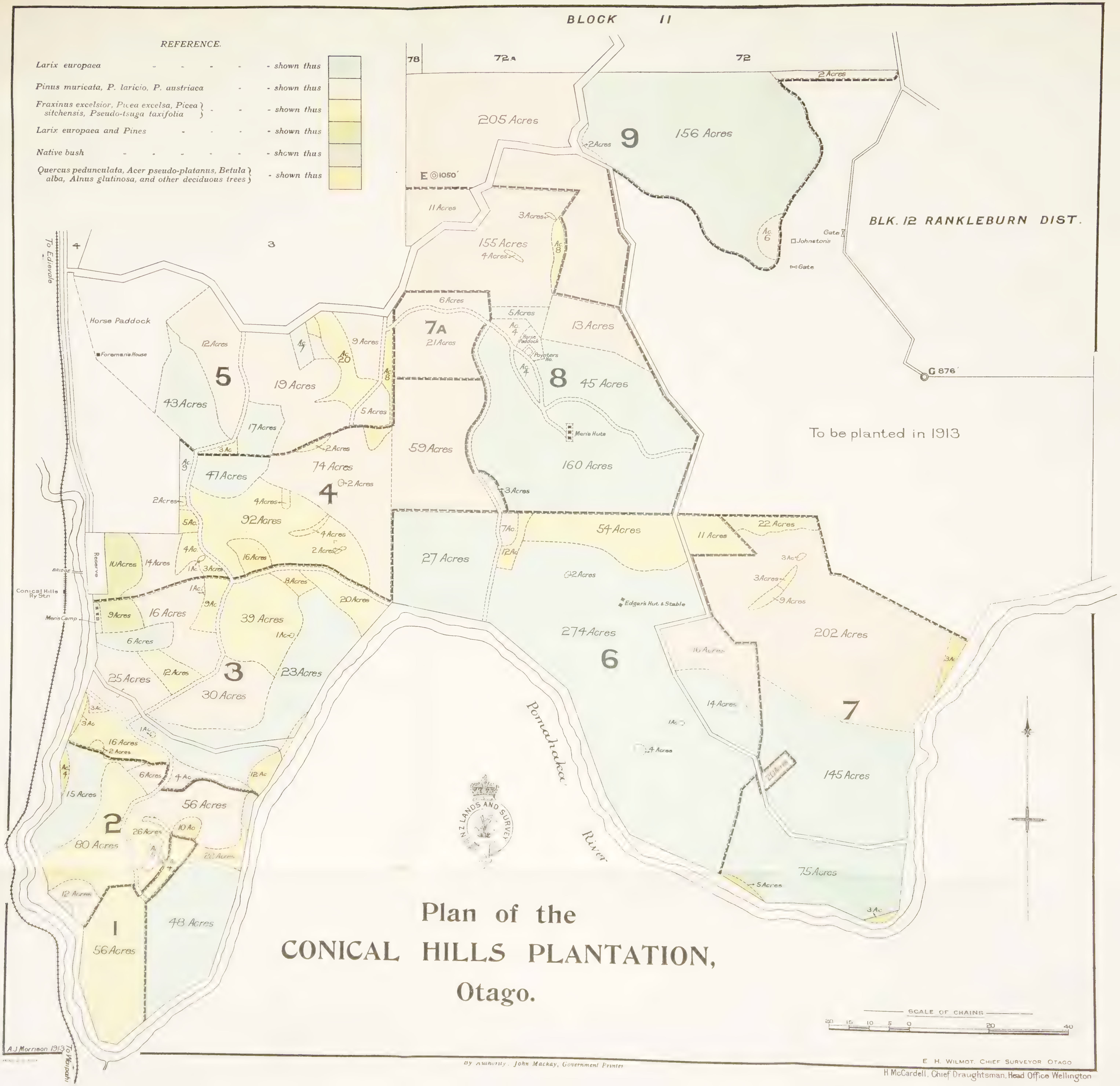
E. H. WILMOT, CHIEF SURVEYOR OTAGO.

H. McCardell, Chief Draughtsman, Head Office, Wellington.

By Authority: John Mackay, Government Printer.

C-1B.


2 Acres
BLK. 12 RANKLEBURN DIST.
Gate
Johnston's
Gate
G 876′
To be planted in 1913
res



Plan of the CONICAL HILLS PLANTATION, Otago.

By Authority: John Mackay, Government Printer

E. H. WILMOT, CHIEF SURVEYOR OTAGO

H McCardell, Chief Draughtsman, Head Office Wellington

1913.

NEW ZEALAND.

PURCHASE OF FREEHOLD OF LEASEHOLD LANDS

(CASH RECEIVED FOR) DURING 1912–13.

Return to an Order of the House of Representatives dated the 5th September, 1913.

Ordered, "That there be laid before this House a return showing, for the financial year ended 31st March, 1913, the amount of cash received by way of purchase of freehold of leasehold lands."—(Mr. Ell.)

RETURN SHOWING THE AMOUNT OF CASH RECEIVED FROM THE PURCHASE OF THE FREEHOLD OF LEASEHOLD LANDS FOR THE FINANCIAL YEAR ENDED 31ST MARCH, 1913.

Amount received, £60,534 10s. 2d.

Approximate Cost of Paper.—Preparation, not given; printing (1,400 copies), 17s. 6d.

By Authority: John Mackay, Government Printer, Wellington.—1913.

Price 3d.]

APPENDIX C.

SELECTED LETTERS ON MATTERS CONNECTED WITH THE INQUIRY OF THE COMMISSION.

No.	Writer.
1.	Rev. J. H. Simmonds.
2.	C. A. Cotton, M.A., Lecturer on Geology, Victoria College.
3.	A. E. Thornton, Esq., Dairy-produce Grader.
4.	Tasman Smith, Esq.
5.	Sub-committee, Forestry Commission.
6.	Chief Health Officer.
7.	D. Allman Marchant, Esq.
8.	W. L. C. Williams, Esq.
9.	Secretary for Agriculture.
10.	W. T. Morrison, Esq.
11.	Duncan Rutherford, Esq.
12.	J. C. Malfroy and Co.
13.	R. Maris Clark, Esq.
14.	Joseph Butler, Esq.
15.	W. L. C. Williams, Esq.
16.	J. H. Davison, Esq.
17.	Ronald Opie, Esq.
18.	„
19.	Bernard Chambers, Esq.
20.	A. E. Haskell, Esq.
21.	W. Quinn, Esq.
22.	Orton Bradley, Esq.
23.	W. M. Cottrell, Esq.
24.	M. Murphy, Esq.
25.	West Coast Timber-trading Company.
26.	Greymouth Wharf Labourers.
27.	A. H. Cockayne, Esq.

No. 1.

TIMBER EUCALYPTS IN NEW ZEALAND.

[By Rev. J. H. SIMMONDS, Wesley Training College, Auckland.]

THE value of eucalyptus timber is so well known to our engineers, architects, wheelwrights, and farmers that there is no need to spend words in proving it here. We are simply in the position of having some of our vital industries dependent upon the forests of Australia ; and any one who has travelled in that country with his mind advertent to the timber problem knows that the best we can hope for in looking to the original sources of supply is that we shall in the near future have to accept inferior grades of timber at indefinitely advancing prices. If we are to meet the situation in a permanently satisfactory manner it must be by establishing hardwood forests in our own country.

Of the eighty to ninety timber-yielding species of eucalyptus growing in Australia and Tasmania, it is certain that a considerable number can be successfully grown over a wide range in New Zealand. There are others that will probably be restricted to warm districts a little inland from our northern coasts. If some still remain that can never find a congenial home anywhere in this country, we can do without them. Our policy should be to use the experience already gained in planting extensively the best of those that have done well with us, while we persistently experiment, on a smaller scale and in various localities, with the most promising of the others.

The eucalypt most widely known in New Zealand is the blue-gum *(E. globulus)*. It grows quickly to a large size in many parts of both Islands. In some localities it has failed badly, but its range of healthy and vigorous life still entitles it to a place in the first rank of hardy exotics. Blue-gum saplings, like most other saplings, are soft and perishable ; but the esteem in which the timber of this species is held in Tasmania and Victoria suggests that when our own mature trees are properly milled and seasoned they will yield a very valuable hardwood. For durability in contact with soil or water, Baron F. von Mueller gives the wood of *E. globulus* a medium position between the white-gums and the stringy-barks on the one hand and the red-gums and ironbarks on the other. For joists, studs, rafters, and heavy scantling in house-building he says it is one of the best. He further speaks approvingly of its use in ship-building, in carriage and implement manufacture, for telegraph-poles, for bridge-planking, and for railway-sleepers when the timber of *E. rostrata* was not available. In California, where eucalyptus-growing is being carried out systematically on a large scale, it is *E. globulus* that is most in favour for general planting, the opinion of experts there being that the timber is excellent for a wide range of purposes. Popular prejudice has had much to say against blue-gum, just as it has had much to say against *Pinus insignis ;* but it seems certain now that these two familiar trees are both destined to hold an important place in our future forestry.

In various parts of the Dominion may be seen tall and stately eucalypts with the bark on upper stem and branches smooth and white and the flowers usually in threes. They are known to botanists under the specific name of *viminalis*. Some idea of their rate of growth and ultimate size will be gained when it is mentioned that a tree thirty-two years old was found by the writer to have a girth of 10 ft. 4 in. and a height of 100 ft. The timber of this eucalypt is not one of those with a reputation for great durability in contact with the ground, but from the account of it given in Mueller's "Eucalyptographia" it seems safe to infer that when sawn into boards and scantling for use in dry situations it will be found compact, durable, and not liable to warp. Visitors to Rotorua may see a splendid group of *E. viminalis* trees close to the railway-station. Older single specimens of a particularly beautiful strain may be seen in the grounds of Mr. R. C. Allen as the Thames train passes the Piako Station near Morrinsville. Mr. T. W. Adams could tell us that the species is equally at home in his forest plantations at Greendale, on the Canterbury Plains. Its celerity of growth, its hardiness in a wide range of situations, the great bulk of its timber yield, and its beauty entitle *E. viminalis* to favourable consideration and thorough trial.

In the Waikato there has been made an especially valuable discovery in eucalyptus-growing. Just thirty-eight years ago last spring the late Mr. John Reynolds, on the recommendation of an Australian bushman, imported several small parcels of eucalyptus-seeds from Sydney, and sowed them in rows on cultivated ground at "Trecarne," Cambridge. The scientific names of the several species were not known at the time, but have since been ascertained. The two that have made the largest growth and are most valued by the proprietor, Mr. Richard Reynolds, are the stringy-bark (*E. eugenioides*) and a eucalypt now identified by Mr. J. H. Maiden, F.L.S., Government Botanist of New South Wales, as *E. Macarthuri*. It is this latter tree that here demands special description and report. It has its stem and larger branches covered with a rough but non-fibrous bark. Its buds, flowers, and fruits are small, and usually in sevens. The foliage is abundant, dark-green, and often drooping. In close plantations it develops a tall stem free from branches and of even thickness. Some of the trees at "Trecarne" have reached a girth of 8 ft. to 10 ft. and a height of 100 ft. The timber is sufficiently fissile to be easily split with maul and wedges. The heart-wood is of a pale-red colour, and from an early stage in the tree's life forms 75 per cent. of the whole bulk of the stem. Fencing-posts split out of this eucalypt fifteen to twenty years ago still have the heart-wood quite sound. From a thinly planted area of less than 3 acres there have already been taken 3,000 fencing-posts, 250 stock-yard rails, and 200 gate-posts, besides saplings and firewood; and the still standing trees will yield twice as many more. Had the whole area been planted with *E. Macarthuri* and the trees placed closer together, the crop would have been much heavier.

Mr. Richard Gillett, of "Peach Grove," Kirikiriroa, Hamilton, has two plantations of "gums," one dating from 1881 and the other from 1884. The seed was sown *in situ*, the sod having been previously turned where each tree was to grow. The seed in each case proved to be mixed; but it fortunately happened that the predominating species in both was *E. Macarthuri* as just described. An average tree in the older plantation has a girth of over 6 ft. and a height of 125 ft. Fencing-posts split out when the trees were only fourteen or fifteen years old still have the heart-wood quite sound. From the trees of this species in the younger plantation, which has an area of only ¼ acre, there have been taken out and sold 4,000 fencing-posts, ten piles 75 ft. long for bridge-construction, and some other large trees, the net receipts for which have amounted to £120; and it is estimated that the trees still standing will yield an equal product. From this experience Mr. Gillett infers that an acre of *E. Macarthuri* properly planted and grown would, when thirty years old, be worth £1,000 on the stumps, while long before that the thinnings would have paid working-expenses. Growing so rapidly, the timber of this eucalypt is liable to crack radially in drying. If by special care in felling and seasoning this one defect could be overcome, there seems to be no reason why these magnificent trees should not be converted into street-blocks, railway-sleepers, or girders and planking for bridges. Mr. Gillett would in future plant *E. Macarthuri* 6 ft. apart, and thin out as soon as the young trees are large enough to be useful. Other eucalypts represented by noble specimens in Mr. Gillett's grounds are *obliqua* and *viminalis*.

On the eastern railway reserve at Papakura there is a splendid little forest of eucalypts, consisting mainly of trees that are included by botanists in a specific group called *regnans*. These trees look like stringy-barks, but the persistent outer bark is only subfibrous, while the seed-cases are small. To realize the size and beauty of the trees it is necessary to leave the train and walk through the plantation, It is then seen that the stems are large enough for the sawmill. Some of them run up to a height of 50 ft. without a branch, and had they all been planted under forest conditions this would have been the case with the majority. Seven trees carefully measured for the writer by a friend give the following averages: Total height, 100 ft.; height to first branch, 37 ft.; girth, 8 ft. The age of the plantation is said to be twenty-nine years. Reports on the timber of *E. regnans* lead us to believe that if these trees were properly milled into boards and scantling the timber would, for house-building, be of excellent value. The species is very hardy, and is widely represented. The variety at Papakura is distinguished by Mr. Maiden as *fastigiata*, and is the best for cultivation.

So far as the writer is aware, the true stringy-barks have not been planted in large numbers in any one locality in New Zealand; but scattered about in various situations there are sufficient single trees and small plantations of *E. eugenioides* and *E. obliqua* to show that these valuable trees could be successfully grown over a wide range in the North Island, and probably also in milder districts of the South Island.

Mr. Robert Glasson, of Linwood, Drury, recently had some stringy-bark trees sawn up for the framework of a new house. In answer to inquiries, he now writes to say that the timber has given him entire satisfaction. It is interesting to further learn from his letter that the house is lined throughout and partly ceiled with *Pinus insignis* boards, some of which are 16 in. wide; and that, large though the pines were, the stringy-bark eucalypts planted about the same time had attained an almost equal size.

Of the red-gums *E. tereticornis* and of the ironbarks *E. sideroxylon* have both been noted in the Waikato and in Piako. Fair specimens of *sideroxylon* may also be seen on the western railway reserve at Papakura. On the Auckland isthmus *E. tereticornis* is hardy and fairly rapid in growth. About forty-five years ago the late Dr. Kinder had a number of eucalypts planted on his property in Arney Road, Remuera. Measurements of surviving trees recently taken are as follows:—

	Girth.	Height.	Condition.
Tereticornis	6 ft. 3 in.	85 ft.	Healthy and vigorous.
Longifolia	6 ft. 6 in.	90 ft.	,,
Punctata	6 ft.	80 ft.	,,
Eugenioides	7 ft.	100 ft.	,,

Tereticornis, *longifolia*, and *punctata* all yield valuable hardwoods durable in contact with the ground, while *eugenioides* is probably the best of the stringy-barks.

The writer has just had an opportunity to closely inspect the eucalyptus plantations of the Forestry Department at Whakarewarewa and Waiotapu. There are altogether 1,715 acres under eucalypts, and the trees are everywhere healthy and in vigorous growth. The plantations are situated in an area where, in addition to cold winters, there are occasional severe frosts in summer. In commencing the cultivation of eucalypts under these conditions there was no option but to choose hardy species. Tender subtropical trees would have perished almost as fast as they were planted, or at the best would have struggled on as mere stunted shrubs. Hence the principal specific groups represented are those known as *amygdalina*, *coriacea*, *Risdoni* var. *elata*, *Muelleri*, *Gunnii*, *viminalis*, *obliqua*, *regnans*, *eugenioides*, and *sieberiana*. A few of these may serve only for shelter, firewood, and rough fencing; but the five or six last named are certainly valuable timber-trees that may be expected to grow to a large size. Quite possibly on the pumice land all of them will develop a degree of durability beyond that attained in their native habitat. The object-lesson as a whole is of immense value as showing what may be done with eucalypts in our colder inland districts, especially as the trees will soon yield an abundant supply of seed for distribution. The young forests of larch, pine, and eucalypt are already softening the climatic conditions, and thus preparing the way for species that have hitherto been unable to endure the winds and frosts. In judging timber values, we must remember that they are relative to circumstances. Thus, even in parts of Australia where more durable timbers are not obtainable and cannot be grown, the white-gums and stringy-barks come into demand and are gladly utilized.

In the grounds of Wesley Training College, on the Auckland isthmus, we have nearly forty species of eucalyptus under trial. They are distributed in small plantations, so that they may as far as possible be tested on different kinds of soil. Many of them are exposed to the full force of the prevailing south-west winds, and have consequently made less growth than would have been the case had they been effectively sheltered. The growth results to date for trees of twenty species are as follows:—

Name.	Number of Years from Planting.	Girth 4 ft. above Ground.	Height in Feet.
Red-gums—		Ft. in.	
Rostrata	9	3 2	42
Tereticornis	9	3 2	40
Ironbarks—			
Paniculata	15	3 0	43
Sideroxylon	15	2 9	40
Stringy-barks—			
Capitellata	15	3 0	40
Eugenioides	4	1 2	21
Obliqua	8	2 1	30
Macrorrhyncha	9	3 6	35
Miscellaneous—			
Macarthuri	9	4 0	50
Resinifera	9	1 11	40
Pilularis	7	1 10	30
Longifolia	7	1 4	27
Robusta	8	2 4	30
Globulus	35	8 0	80
Sieberiana	9	2 0	27
Viminalis	9	3 1	42
Gunnii	6	2 0	33
Amygdalina	8	2 6	35
Coriacea	9	2 6	40
Urnigera	6	1 8	25

Eighteen other species are represented by healthy specimens, but the plants are as yet not sufficiently advanced for detailed report. The complete list includes nearly all the most valued of the timber eucalypts; and the experiment as a whole is very encouraging, especially when it is remembered how many localities there are in the north more favourable for growing eucalypts than this isthmus.

To attain their best, eucalyptus trees must be closely planted in wide belts, so that they may have the benefit of mutual protection against winds and frosts, and so also that they may make long clean stems. The forest giants recorded in Australia and Tasmania have grown up in sheltered valleys or in the midst of other trees. We must heed the lessons of nature, and give our eucalypts congenial conditions. In all situations exposed either to cold alpine winds or to salt-sea breezes the plantation should have an outer screen of hardier species, or preferably of pines.

The initial difficulty in any attempt to grow eucalypts is to obtain a supply of seed from good parent trees and true to specific description. A eucalypt may be botanically true to type, and yet of an altogether inferior strain, as may often be seen in the case of *E. globulus*. In the Australian bush the seed-collector, even if he knows his business, is constantly tempted to gather from stunted, twisted, or spreading trees, simply because they are more accessible. He is also tempted to substitute one species for another. The city seed-dealer is himself deceived, and passes on the deception to his customers. It thus too often happens that the planter, after years of waiting, finds that his trees are quite different from what he expected, and more or less useless. The writer has himself several times been supplied by quite reputable seed-houses with parcels of seed that were either mixed or altogether wrongly named. If eucalyptus-growing is to be made a success in this country, it would seem imperative that some competent person shall visit Australia and Tasmania, and either collect the seeds himself or arrange with trustworthy agents to do it under his explicit instructions. As far as practicable, supplies should be obtained from localities where the climatic conditions are similar to our own. To ensure reproduction of identical trees seed of *E. Macarthuri* must be obtained from the plantations of Messrs. Reynolds and Gillett. *E. globulus* and *E. obliqua* should be reintroduced from Tasmania.

Many of the eucalypts when allowed to do so will spread very rapidly by natural propagation. The seed germinates and grows freely even among grass or low scrub, and not infrequently young trees may be seen forcing their way through a heavy covering of bracken-fern. If, therefore, suitable seed could be obtained in sufficient quantity, it would seem quite possible to cover large areas with trees by broadcast sowing alone. *Globulus, Macarthuri, viminalis, regnans, obliqua,* and other rapid growers would all lend themselves to this method.

Of all timber-trees, the eucalypts, when of considerable size, are perhaps best able to survive a running fire. They may often be seen growing as if nothing had happened after the outer bark has been burnt off their stems. Even young trees when killed to the stump will shoot out and grow again. But of course it is better in every way to protect them from this worst menace to the work of the tree-planter. All large plantations should be surrounded and intersected by fire-breaks. Whether these shall be ploughed, closely grazed by sheep, or planted with umbrageous non-inflammable trees such as oaks is a question circumstances must determine. Methods and details must be left to the practical forester. What the country as a whole needs to take seriously is the necessity for quickly covering sufficient areas with the most valuable hardwood trees that our climatic conditions will permit us to grow.

No. 2.

REMARKS ON EROSION OF SLOPES IN NEW ZEALAND.

[BY C. A. COTTON.]

THE most obvious difference between deforestation of slopes in the southern Appalachians and in New Zealand is that in New Zealand steep slopes are seldom or never cleared for cropping. Obviously, a growth of grass is of considerable value in checking erosion, especially "sheet-wash" erosion and erosion by parallel gullies. Where, however, land is required for pasture there is a tendency to clear slopes of much greater steepness than would be cleared for agricultural purposes. No doubt the slope on which it is safe to clear is much steeper, but there is a greater temptation to exceed the safe slope.

The slope of safety will probably be found to vary much more widely for grassed than for cultivated land, with varying geological conditions, for erosion of grassed slopes takes place usually by the method of small landslips. In this connection two widespread rock formations in New Zealand may be considered—namely, that facies of the older sedimentaries to which the name "Maitai" rocks is usually applied, and the bluish mudstones of the younger group commonly known as "papa."

In the Maitai rocks, as developed in the Wellington District, clastics of medium grain predominate. Where obtained fresh they are found to be well cemented, compact rocks, but there are innumerable intersecting joints which divide the rock into small fragments. Surface-water readily penetrates, and, large surfaces being exposed to attack, the rock is deeply weathered. On all but the steepest slopes, therefore, there is a thick covering of weathered material in the form of a stony or sandy clay, which is sufficiently porous to allow surface-water to pass readily through it. It is seldom, therefore, that the soil reaches that waterlogged condition which results in a landslip. Slips are rare on the hillsides in the immediate neighbourhood of Wellington, and although the bush has been cleared from all but the steepest slopes it has been replaced successfully by grass, and little destructive erosion has resulted.

On these rocks I have observed small changes in stream grades, which, in my opinion, are directly due to clearing, but none that I have noticed have had important economic results. They are shown by the formation of narrow V-shaped channels, owing to increased rapidity of run-off, upon the floors of gullies, the cross-sections of which show otherwise a broad U-shape. Caving along the banks of the new channels seems to be taking place only to a slight extent, and the damage is inconsiderable.

It would seem that on rocks of this type there is no difficulty in starting, after clearing, a good growth of grass, which is effective in checking erosion on slopes up to 30° at least. On slopes up to 40° or even steeper the grass seems to hold the soil fairly well unless the ground is overstocked.

There is danger of passing the safe limit of slope even on these rocks, however, especially in districts like the Rimutaka Ranges. Very steep slopes are being cleared in places along the eastern coast of Marlborough.

There is, of course, great danger in clearing slopes by way of experiment, for if the attempt to grass the cleared slope is unsuccessful, and the soil is lost by erosion, leaving a bare rock surface, reforestation is by no means easy.

Glenn points out that this danger is especially great on rocks which weather spheroidally. The spheroidal type of weathering is usually associated with certain types of igneous rocks, but in the Maitai clastic rocks it is not uncommon. The higher ridges, for example, in the neighbourhood of Wellington, mark the outcrops of strata of coarser-grained, more thoroughly cemented, less-jointed rock than that already described.

In this rock, which is strong enough to be used as road-metal, weathering of the spheroidal type occurs, and the surface is strewn with smooth rounded masses which in some respects resemble stream-worn boulders, but are really cores resulting from the spheroidal type of weathering.

The characters of the rocks usually called Maitai throughout New Zealand are by no means uniform, and no doubt the maximum slope on them which may be safely cleared varies from point to point.

On rocks of the "papa" type, on the other hand, slips are quite common. The subsoil and the underlying mudstone are impervious, and the surface is liable to become so thoroughly soaked that flow results, whole hillsides in some cases being affected.

A grass covering appears to afford no protection against erosion of this type. More protection appears to be afforded by forest; for slopes that were evidently stable when bush-clad have begun to flow after being cleared. The slopes of the valley of the Maungapakeha, on the road from Masterton to Tinui, may be cited as an example.

I have in mind also flowing hillsides of quite gentle slope bordering the Kaipara Harbour; the underlying rock, however, is there an argillaceous limestone.

It will probably be found to be a general rule that the average slope which it is safe to clear is much less steep on the younger (Cretaceous and Tertiary) rocks than is the average on the older (Maitai and other) rocks.

It should be stated that the foregoing remarks are not made as a result of special investigations of erosion on slopes, and that in making them I have had to rely entirely on mental impressions received while my attention was mainly devoted to facts of a different order. I can therefore make no claim to finality for the conclusions reached.

No. 3.

SIR,— The Dairy-produce Grader, Auckland, 23rd May, 1913.

As requested by your Commission, I now have much pleasure in reporting on the various samples of butter packed by the New Zealand Dairy Association (Limited), in boxes made from the following timbers: Taraire, kahikatea, *Pinus insignis*, and tawa.

The butter has been stored in the freezing-chamber at a temperature of 10° F. for a period of six weeks, and before being inspected it has been thoroughly defrosted.

On examination, we found the flavour in the various boxes to be as follows:—

Taraire.—One box paraffin-waxed and one without wax. No taint of wood could be found, and the butter had kept remarkably well. One thing I noticed was that this timber did not appear to take the nails too well, but in every other respect it seems suitable.

Kahikatea, Poplar, and Tawa.—Butter kept remarkably well, and no taint of wood.

Pinus Insignis.—The flavour of these two boxes (waxed and unwaxed) kept remarkably well, there being no taint of the wood.

I am of the opinion that any of these timbers would be most suitable to manufacture boxes for the export of butter; but with reference to the *Pinus insignis*, if used, would suggest that it be paraffin-waxed so as to eliminate any chance of taint, owing to the fact that some of our factories use a lighter parchment paper than others.

Some twenty-odd years ago, when the dairy industry was in its infancy and the only export trade was with Australia, the principal timber used was tawa and totara, and, having experience in the business in those days, I may state that the former wood used to give excellent results, there being no complaints whatsoever with regard to taints.

Another matter I would bring under your notice is that I was asked some three years ago to carry out an experiment with a specially prepared envelope manufactured of grease-proof paper. Butter was packed by the Cambridge Co-operative Dairy Company from one churning in envelopes of this make and placed in boxes made from the following timbers: Oregon pine, kauri, and *Pinus insignis*, and you will see by the enclosed copies of reports that the butter turned out free from taint.

At the present time I have not an envelope on hand, but, should you desire to see one, I believe that one could be borrowed from the patentee, Mr. E. Canavan Smith, of this city.

I trust that this experiment will be satisfactory to your Commission, and should you require any further information it will be my pleasure to supply same.

Kindly instruct me as to what I shall do with the samples of butter.

Yours, &c.,
A. A. THORNTON,
Dairy-produce Grader.

The Chairman, Forestry Commission, Wellington.

No. 4.

DEAR SIR,— Mona Vale, Ma Waro, 22nd May, 1913.

Re establishing plantations on my property.

In 1907 there were 5,000 one-year-old prickly acacia trees planted 4 ft. apart, pit method, by day labour, at a total cost of £5 per thousand, also 2,000 oaks and 500 walnuts 6 ft. apart, pit method, at £6 per thousand, all in grass land. These plantations were practically a failure, due partly to dry seasons, the tops dying back to the ground, and grass choking new growth from the root. The whole area planted with the above trees has since been replanted with *Pinus ponderosa*, with the exception of about an eighth of an acre, which I have kept with the object of observing whether the trees which are alive but making no progress will in time take a start when the grass runs out.

In 1909 I put in 3,000 *Pinus ponderosa* 6 ft. apart, notched method, in grass land. These trees made very little progress for two years, and then came away rapidly. In the same year 1,000 two-year-old Oregon pines and 1,000 larch the same age were planted, also 6 ft. apart, in tussock land, on a southern slope, all of which have done exceptionally well, making from 2 ft. to 3 ft. of growth per year. In the same year I put in 1,200 *Cupressus macrocarpa* in ploughed grass land. There was a large death-rate in these. Those that survived made but fair progress.

All this season's trees were planted 6 ft. apart, notch system, by Millichamp and Sons, of Ashburton; cost of trees with life guaranteed, £5 per 1,000.

I cannot give the cost of fencing, as much of ground planted was only waste corners, some requiring a good deal of fencing, whereas perhaps a larger area required less.

In 1910 the following trees were planted on tussock land: 9,000 larch, 4 ft. apart; 5,000 Oregon pine, 6 ft. apart; all three-year-old trees. The first year these trees only held their own, but made good growth the second year. One thousand one-year-old *Pinus insignis* on the same land did well from the first. These 15,000 trees were also planted by Millichamp and Sons, of Ashburton, by contract, at £3 10s. per 1,000, but with no guarantee. The above-mentioned trees form two separate plantations; in one there are three plots of cocksfoot grass, in all an area of about an acre. The plots were mostly planted with Oregon pine, as they were drier than the rest of the land. Well, hardly a tree lived. The same thing occurred in the cocksfoot plot of the other plantation. I might also mention that F. W. Smith, of Waratah, Albury, planted 8,000 similar trees the same year, and I noticed that hardly a tree grew where there was much grass, which I think is a strong indication that cocksfoot is detrimental to the growth of young trees.

Between the years 1884 and 1890 my father, A. B. Smith, planted 40 acres of mixed trees amidst one another. In 1894 we began to thin out the *insignis*, and have continued doing so up till now, no other fuel having been burned since 1897. I have also had 370,000 superficial feet of *insignis* building-timber cut for own use and settlers on Rosewill Settlement.

Of all the varieties of trees planted by A. B. Smith I notice the rate of growth of each has been as follows: *Pinus insignis*, *Macrocarpa*, Lombardy poplar, Oregon pine, larch, Norway spruce, and Corsican pine.

I have many hundred *Macrocarpa* fencing-posts in the ground. Some I removed after having been in fourteen years, and found the heart timber quite sound.

Yours, &c.,
A. M. Smith.
Per Tasman Smith.

The Chairman, Forestry Commission, Wellington.

No. 5.

Report of Subcommittee on Plantation near Cambridge, Waikato (Messrs. Lethbridge, Murdoch, and Clarke).

Left Hamilton Thursday, 8th May, by motor, at 9.30 a.m., at the invitation of R. Reynolds, Esq., owner of the "Trecarne" Estate, about two miles and a half from Cambridge, on the south bank of the River Waikato.

Weather rainy and cold.

Heartily welcomed by Mr. Reynolds, who explained that his plantation consisted almost entirely of eucalyptus trees, and at once invited us to inspect timbers from this plantation in actual use.

Exhibit No. 1.—Clothes'-line post, about 20 ft. high: Girth at 5 ft. above ground, 22 in.; age of tree when cut down, nineteen years; in use in present position, twenty years. Cut from the middle section of the tree, the bottom portion being used for another purpose. Thickness of sap, about 1¼ in. A hole was dug at the ground-line of this post, and the heart-wood was perfectly sound and solid. Only the sap had decayed below surface of ground.

Exhibit No. 2.—Yard-fence posts and rails: Age of trees when used, thirty years; posts in use, seven years; rails in use, seven years. Very little sap-wood on these posts and rails. The sap had decayed, the heart-wood was perfectly sound and good, and the amount of sap-wood was very small in proportion to the bulk of the several posts and rails. The rails were fixed feather edge uppermost, leaving the sap on the lower edge, and thus allowing the water to run off the sap-wood. Mr. Reynolds explained that his practice is to split both posts and rails to a size a little in excess of the common dimensions, to allow for the decay of sap-wood.

Exhibit No. 3.—A number of large fencing-posts which had lain on the ground unused for ten years. The sap had disappeared and the remaining heart-wood was very hard and dense.

Exhibit No. 4.—The plantation from which the foregoing materials had been procured. Dimensions, approximately: Length of plot, 180 yards; width, 67 yards. This is equal to about 2½ acres. During the past ten years there has been taken from this area 3,000 ordinary fencing-posts, 200 large posts (strainers), 250 fence-rails; all firewood used on the homestead and a large amount which has been given away to workmen and others. There still remain about 350 trees; some of these are of a slow-growing order, such as ironbark and red-gum, but all are of a useful size. Of the larger ones, a specimen measured 82 in. in girth, and was estimated to be 100 ft. in height (rough bark). No. 2 (smooth bark), 120 ft. high, 80 in. girth, thirty-five years old. Regrowth from stump after original tree had been cut down: No. 1—Height, 40 ft.; girth, 37 in.; age of regrowth, ten years. No. 2—Same age; had blown down from parent stump; length on ground, 54 ft.; girth (5 ft. from bottom end), 36 in. No. 3—Three leaders growing from one stump; two of these small main leaders about 60 ft. in height and 34 in. in girth.

Exhibit No. 5.—Stump of tree grown on outer edge of plantation: Girth outside the bark, 14 ft. 7 in.; girth inside the bark, 11 ft. 7 in. Seventy large fencing-posts were split from the butt-log of the tree felled from this stump. The seed of this tree, in common with others, was sown on the 8th October, 1874.

Exhibit No. 6.—Stringy-bark gate-post, cut from the top of a tree thirty years old. Girth at ground-line, 21 in. The sap-wood on this post is barely a quarter of an inch in thickness.

Reproduction.—This takes place by natural means. Mr. Reynolds remarks: "We have thousands of these young plants. Draw the trees from the ground, stow them in a wet sack, have the holes ready, and plant at once. With this method there are practically no losses."

Name of Tree.—Mr. Reynolds describes it as the Tasmanian messmate-gum. The botanical name (see Maiden's revised list) is *E. Macarthuri*. (Refer to Rev. Mr. Simmonds's letter.)

General Observations.—Mr. Reynolds describes this tree as being of two kinds—the rough bark and the white bark, there being no other apparent difference in the character or qualities of the two kinds, and is informed that this variety of gum tree is growing at the Government plantation at Waiotapu.

As to the value of such plantations, Mr. Reynolds said, "With the exception of the house plot, I have no area of land which is better occupied than that which is occupied by trees."

Speaking of a 10-acre block owned by a friend at Lichfield, which he had been asked to inspect, and which the owner did not appear to attach much value to except for purposes of shelter and supply of firewood, Mr. Reynolds said, "If I had that block I would not sell the trees for £50 an acre."

Questioned as to blue-gum (*Eucalyptus globulus*), Mr. Reynolds said he had at one time several thousands of these destroyed by frost, when they had reached a height of about 7 ft., and that he does not plant it now. As regards planting in fern land, it will pay to burn the fern, plough the land, lay it down in clover for two years, plough in the clover, and then plant the young trees. "Results will be as good in four years as in ten years if planted in unprepared fern land."

As to other trees for fencing, &c., he described an area of river-bank on steep ground of practically no value for other purposes, being a narrow strip the exact size of which was uncertain. This was planted with *Robinia* thirty-five years ago (known in Britain as Cobbett's acacia). This now contains timbers which had been valued at £600 for fencing purposes.

I only planted a few scores of plants some distance apart, the natural increase from the root (suckers) has produced the total, so the actual age of the total value of marketable timber would be at least ten years less. I do not think the total area of this irregular narrow strip would be more than 5 acres; it is a most valuable timber for fencing purposes, but compared (weight for age) against the *E. Macarthuri* it must take second place. The posts split out of the gum plantation were large. I value the fencing-posts at £5 per 100; rails, ditto, but the gate or straining posts were worth at least 7s. 6d. each.

No. 6.

Karere Tree-planting Camp for Consumptives.

Department of Public Health, Hospitals, and Charitable Aid,
Wellington, N.Z., 16th May, 1913.

Sir,—

I have the honour to forward herewith, as requested, details with regard to the capital and maintenance expenditure of the above camp for the years 1908–9, 1909–10, 1910–11:—

	Capital Expenditure.	£	*Maintenance Expenditure.*		£
1908–9.	Timber, cement, bricks, tents, closets, blankets, &c.	216	Food, fuel, water, salaries, and wages ..		513
1909–10.	Timber, tents, cow-house, &c. ..	148	,, ,, ,, ,, ,, ..		737
1910–11.	Duck for tents	15		£	
			Chaff, cartage, and repairs	14	
			Wages, manager and gardener	185	
			Medical attendance, ten months	32	
					231
		£479			£1,581

To the capital cost may be added another £50, representing £25 for prison labour, not charged for, and about £25 for stretchers, blankets, and odds and ends forwarded from the Cambridge Sanatorium.

The disparity shown with regard to the maintenance expenditure for the three years is due to the fact that during the first two years the camp was established the patients' food was paid for, and also the salaries of nurses. Early in 1910 it was decided to admit to the camp only convalescent patients who were capable of looking after themselves, and who would be able to work with some degree of continuity. Consequently, it was possible under these arrangements to dispense with the services of the nurses, and the patients were able to earn more than sufficient to pay for their food.

The above expenditure was for a camp for twelve patients. This was the average number of inmates during the three years the camp was in existence.

I have, &c.,
T. H. A. Valintine,
Chief Health Officer.

The Chairman, Forestry Commission, Wellington.

No. 7.

SIR,— Ruatapu, 9th May, 1913.

I have the honour of submitting the following report on the subjects under your consideration.

In relation to the existing forest lands which it is desirable to conserve for the purpose of soil-protection, preventing denudation, prevention of floods, and water-conservation, the bush adjoining rivers, especially at the mouths and on watersheds, should be reserved for the purpose of preventing erosion and floods, also for water-conservation and scenic purposes.

A remarkable instance of the necessity of protecting the forest growth at the sources of rivers is given by Mr. Elwood Meade, of the Irrigation Department, Victoria, in his paper read before the Science Congress, Melbourne, in January of this year. From his personal observation he told of an area of land in America watered by two rivers. The timber growing at the head of one of these rivers was sold for sawmilling purposes and removed. In a few years this river had practically disappeared, and the land previously irrigated by its waters became a desert subjected to floods after rain, whilst that portion of the area watered by the river from which the timber had not been removed suffered no damage nor alteration.

The loss of valuable land adjoining rivers owing to the banks not being protected by growth of trees is instanced in the river-beds of Canterbury, some of which are over a mile in width. Again, in the Manawatu district, Wellington, the rivers since the removal of the bush frequently change their course, and sweep away large areas of valuable land.

On the raupo flats, Kaipara district, adjoining the Wairoa River, no natural growth exists, and thousands of pounds have been spent, ineffectually so far, to prevent erosion.

The conservation of bush on watersheds is necessary to regulate the flow of the rainfall down the hillsides to the river-beds; the trees and vegetation regulating and holding back the water prevents floods.

Any bush lands suitable for agricultural or pastoral purposes should be quickly, but very economically, cleared of the bush by sawmilling, and the land put into profitable use. The available land for settlement is rapidly getting less and less, and with the demand existing attention should be paid to the heavy forest lands remaining.

In Westland it has too long been erroneously supposed that the land is unsuitable for agricultural and pastoral purposes. The land has been given over to the miner and sawmiller, without due consideration of the resultant work in relation to settlement. The disposal of land is largely in the hands of the Warden's Court, hedged round by the regulations of the Mining Act, with the sole view of utilizing the land or forests for the benefit of the miner and sawmiller. These latter frequently leave the areas in a condition practically unfit, unless a large expenditure is incurred, to bring them into profitable use for settlement.

The method of dealing with applications for timber in mining-areas is as follows: The Warden receives applications and passes them over to the Crown Lands Department for inspection of the area and report. This being obtained by the Crown Lands Ranger, the application, with report attached, is sent back to the Warden, who then deals with the matter. The Wardens have no supervision of the areas so granted, this duty falling on the officers of the Crown Lands Department, who periodically inspect and report on the work done by the millers. This dual control now in existence is cumbersome and unnecessary, and its abolition would benefit the two departments—the miller and the community in general. The Crown Lands Department, having the disposal of the land for settlement purposes after the miller has finished with it, should certainly control the disposal of areas for milling purposes. If this course is followed a systematic method of clearing the land by milling could be instituted.

Under the present system the haphazard granting of areas, owing to the millers picking out only the better portions of the bush and leaving the poorer, would be stopped. The timbered lands should be worked in a face, the land so cleared would be ready for settlement in compact areas, making the work of surveying and roading a cheaper and easier one than at present. It would also enable the County Council authorities to systematically road the district, and eventually save them large sums of money required under the present system to form and maintain roads which will in the future prove unnecessary.

A glance at the map showing the areas already worked and those now held for milling purposes shows the urgent necessity for a better system of granting cutting-rights.

In the report of the Timber Commission, 1909, after fully investigating the question of dealing with timber lands, the Commissioners reported that the system of dual control by the Warden and Crown Lands Department was not in the best interests of the community, and that the disposal of all timber should be in the hands of the Land Board alone.

The method of disposal of timber by granting millers stated areas is not the most profitable or economical from a national point of view. To get the best results, larger revenue for the Crown in the shape of royalty and railway freights, more employment for labour, and, of equal importance, better clearance of the land for settlement purposes, the present system should be altered.

In the Auckland and other districts the timber is accurately estimated on the log measurement of the standing tree. An area open for sawmilling purposes is offered at an upset value at per hundred feet royalty based on log measurement, and disposed of by tender, auction, or in some other suitable and necessary manner.

In the Westland District, on areas granted by the Warden's Court the quantity of growing timber is not measured or estimated by the Crown, the royalty being paid on the sawn output of the mill. The miller under this system is inclined to run through the bush, taking only the clean portion of the barrels, and leaving behind the knotty and faulty trees. Under the system of paying royalty on log measurement he must take all growing timber which has been estimated or measured, or lose the royalty he has paid thereon.

At the mill, also, the loss in conversion is not of so much importance to the miller paying royalty on sawn output; the main object, seemingly, is to get as much clean timber as possible without producing OB or lower grade. Millers frequently state that they get up to 80 per cent. clean timber from their mills. This percentage is only obtainable by systematical and intentional waste in the bush and mill, as can be easily seen by the inspection of worked areas of Crown lands, and by watching the operations of mills paying royalty on the sawn output.

On the occasion of the visit of your fellow-Commissioners to Ruatapu it was seen how the bush on the freehold was cleared down to trees 8 in. in diameter. Working the bush in this manner about 50 per cent. of clean timber and 50 per cent. of OB and second-class is produced. If all bush lands in Westland were worked in the same manner, more timber would be saved for use than can be grown by replanting. For settlement purposes alone it is absolutely necessary that all the millable timber should be removed by the miller. The climatic conditions are not conducive to good burns, the result being that the settler has to wait years for the timber left behind by the millers to rot before the full benefit of the land for grass-growing can be obtained.

Giving evidence before the Timber Commission in 1909 leading Greymouth sawmillers stated that unless steps were taken to prevent Oregon and other similar woods from competing with New Zealand timbers it meant that the millers would be forced to leave from 50 to 60 per cent. of the available standing timber in the bush to rot or burn. It must be presumed that these experienced gentlemen were speaking from practical knowledge, and that there has been, and is, at least this amount of waste going on since 1909.

A comparison of worked areas on Crown lands on the Coast with some of those in the North Island shows the necessity of stopping such a shameful waste of a valuable asset by at once bringing the disposal of timber under the system of sale on log measurement. If such a course were followed it is probable that at least 75 per cent. more timber would be produced per acre.

Government estimates of our remaining supplies of timber, which in this district are perfectly unreliable because no proper method of measurement or estimation has been used, give us from forty to sixty years of life, based on the present rate of increase in consumption. Taking the evidence before the Timber Commission of sawmillers, that they are leaving in the bush 50 to 60 per cent. of the standing timber, and accepting the loss in conversion at 30 per cent., the Crown is receiving royalty on only 27 or 33 per cent. of the standing measurement.

Taking the present annual output of timber from Westland at about 50,000,000 ft., the timber left behind to rot and burn, together with the unnecessary waste at the mills, would represent at least another 40,000,000 ft. to 50,000,000 ft. This represents a loss of thousands of pounds per annum, the amount of royalty received equalling about 2d. per hundred feet on the log measurement of standing timber. From the available returns on afforestation issued by the Forestry Department, as set forth in the annual returns and other published results, it is possible to plant foreign timbers to produce from 30,000 ft. to 40,000 ft. per acre in from forty to sixty years. In the Forestry report of 1909 Mr. H. A. Goudie, the Superintending Nurseryman for the North Island, estimates the value of the timber so grown, when it reaches maturity, at 12s. 6d. per hundred feet. Taking this valuation as correct, what will the sawn timber produced from these areas cost the consumer?

Accepting present costs and methods of production, the logs produce, say, 75 per cent. of timber: 12s. 6d. per hundred feet, less 25 per cent. loss equals a first cost of 16s. 8d.; milling, 6s.; average railage in Westland, 1s.; sea freights and Lyttelton charges to Christchurch, 5s.: total, £1 8s. 8d. This would put timber beyond the reach of the ordinary consumer, and under these circumstances it does not seem advisable to utilize for afforestation purposes in Westland any land that can profitably be used for agricultural or pastoral purposes.

With the area of available land for settlement yearly diminishing, is it wise to take large areas —and they must be large to be of use—when the same results—prolongation of timber-supplies—can be obtained by a more economical system in utilizing the native growth? The results of afforestation so far have proved very successful in acclimatizing and growing foreign woods. The departmental officers, however, recognize that the present annual grant is very inadequate to provide for the expansion of areas and maintenance of existing plantations.

If the evidence gathered by the Commission warrants the extension of the work of afforestation, the necessity of providing highly qualified and trained officers to carry out the work must receive attention. If the supply of timber for future generations is to be produced by afforestation, the present efforts must be largely increased. The amount of timber produced in New Zealand annually is, roughly, 420,000,000 ft., of which about 90,000,000 ft. is exported, leaving 330,000,000 ft. for home consumption. It will be seen that to provide for future requirements by afforestation it is necessary to plant at least 8,000 acres per year. This is four times the area now planted annually, so the necessity of training a large staff to attend to the extension of plantations is apparent.

In reference to the proposed export duty on white-pine, I am of the opinion that if this duty is imposed it will lead to a very great waste of the offcuts produced. The quantity of white-pine used in New Zealand, except for butter-boxes, is very small, and unless the millers can supply the Australian markets with the offcut sizes at a very low rate they will be unable to dispose of them at all. The butter-box sizes will be exported, duty or no duty, and the offcuts, representing about 33 to 40 per cent., will be practically wasted. Even at present rates the Siberian timber produced by cheap Asiatic labour is competing too successfully with our white-pine offcuts in Australia.

Summarized, my opinions on the questions before you are,—

1. For the purpose of soil-protection, water-conservation, and prevention of floods it is necessary to conserve or replant timber on river-banks, watersheds of rivers, and hillsides adjoining railways and roads.

2. In the districts subject to droughts, forest areas liable to be destroyed by fire should be utilized for sawmilling purposes as quickly as possible without waste.

3. Forests on land suitable for agricultural or pastoral purposes should also be sold for sawmilling purposes and the land put to profitable use.

In reference to 2 and 3, the methods of disposal of timber and granting of cutting-rights should be standardized throughout New Zealand. Methodical and economical systems of granting and working cutting-rights in forests under the control of the Crown Lands Department should be instituted.

4. The dual control of Warden's Court and Crown Lands Department over timber-areas should be abolished.

5. A reliable estimate of all standing milling-timber should be made before it is offered for sale.

6. Royalty should in all cases be based on the log measurement of standing trees, and strict and efficient supervision by officers of the Crown Lands Department of the proper working of timber-areas to prevent unnecessary waste.

7. The disposal of all lands cleared by millers for settlement purposes as soon as possible after surrender, so that the settler may take advantage of the tops, &c., felled by the miller for burning operations.

8. If evidence proves that it is possible to grow timber cheaply enough to supply local demands in the future, a vigorous extension of the afforestation works of the Forestry Branch should be started at once. The training of suitable officials to carry out the work necessary to get the best results should be undertaken, and in this connection it might be advisable to offer travelling scholarships to enable locally trained men to visit the countries where afforestation has proved a success. To induce good men to take up this branch of science, none but locally trained applicants should be considered in appointments to the afforestation branch of the Forestry Department.

9. In view of the lack of demand for this class of timber in New Zealand it is not advisable to impose an export duty on white-pine.

I have, &c.,

The Chairman, Forestry Commission, Wellington.

D. Allman Marchant.

No. 8.

Dear Sir,— Cambridge, 18th May, 1913.

I have received your letter dated the 7th instant.

I regret that owing to my absence at Waihi I did not receive your letter until my return last night.

In reply to your question as to whether my statement as to the height, 200 ft., is reliable: my authority is Mr. John McCaw, then A.R.B. Manager.

Re length of clean barrel, I measured that myself—130 ft.—there being several trees lately fallen with the branches removed ready for crosscutting at the time Matamata was being valued for the Government.

I had a roving commission from Mr. Tole and was not subject to the Waste Lands Commissioner, whom I found it necessary to refuse to recognize, much to his indignation.

For the information of your Commission, I sowed the pine-seed, prepared the land, and planted the 40 acres of *maritima* myself, with one assistant; 2,000 a day was our day's work.

Re the *Pinus insignis*, 16,000, I used three ploughs, three planters; myself and a Native made the holes, and completed the job in two days and a half.

An 80-acre plantation completed with four ploughs and a corresponding lot of planters in four days.

I have a *Pinus insignis* tree growing in my grounds here 4 ft. through, 50 ft. without a branch, and 30 additional feet of knotty timber. Mr. Roache, engineer at Hororata Rapids, estimates it at 5,000 ft. of clean building-timber and 1,500 ft. of rough timber.

I enclose a strip of outside heart of *Pinus insignis* fifteen years old and fifteen years fallen; heart, 9 in. through.

Yours, &c.,

W. L. C. Williams.

No. 9.

Department of Agriculture, Industries, and Commerce,
Wellington, 11th April, 1913.

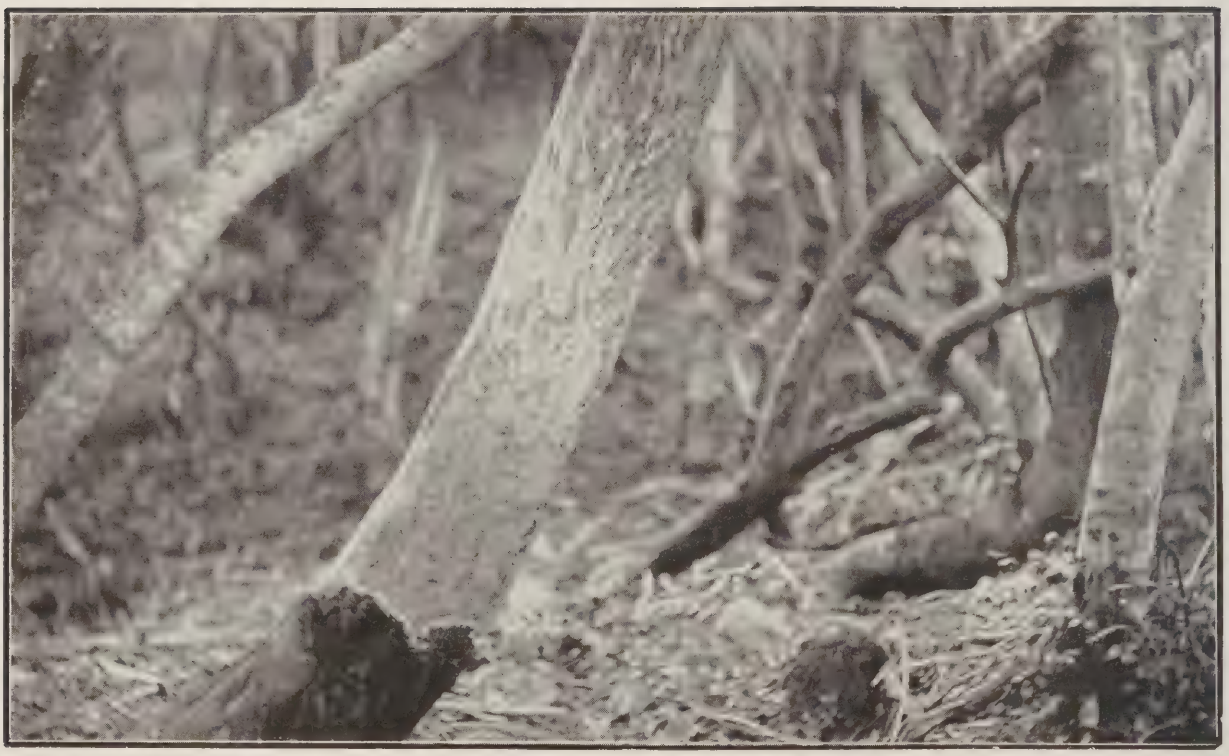
Sir,—

With reference to your letter of the 1st instant, in which you ask to be advised of the result of an experiment which this Department carried out some time ago with a view to testing the suitability of poplar timber for the manufacture of butter-boxes, I have the honour to forward herewith, for your information, a memorandum of the 8th instant from the Director of the Dairy-produce Division of this Department, in which full particulars of the experiment are given.

I have, &c.,

The Chairman, Forestry Commission, Wellington.

F. S. Pope, Secretary.



Tree, Nothopanax Colensoi, barked by Red Deer near Hanmer.

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Poplar Timber for Butter-boxes and Cheese-crates.

Department of Agriculture, Industries, and Commerce (Dairy-produce Division),
Wellington, 8th April, 1913.

YOUR memo. 13/438, of 3rd instant.

As the result of some correspondence which took place between Mr. H. M. Reader, of Havelock, and this office early in 1911, a large poplar tree was obtained in that district through Messrs. Robertson, timber-merchants.

This tree, which yielded 500 ft. of timber, was cut into suitable lengths and sizes, and forwarded to Wellington. After allowing some months for the timber to become thoroughly seasoned, six butter-boxes and six cheese-crates were made up by the Wellington Cooperage Company. In December of 1911 two of the boxes were filled with butter at the Konini Factory, the butter from two separate churnings being used. From each churning one poplar and one white-pine box were filled with butter.

After storing the produce for over two months the butter was examined for flavour, having previously been graded before being stored. At the first grading the flavours in all the boxes were similar. At the time of regrading the only noticeable difference in the flavour was that that of the butter near the sides of the poplar boxes was hardly as good as in the white-pine boxes. The difference, however, was very slight. Had the poplar boxes been first covered with paraffin-wax inside, it is probable that the flavour of the butter at the sides of the poplar boxes would have been as good as that in the white-pine boxes.

Poplar timber as compared with white-pine is whiter in colour, lighter in weight, and not so close in grain. In the boxes tested the nails did not hold so well as in the white-pine, but this little drawback could no doubt be easily overcome.

The timber made up into cheese-crates gave a satisfactory package, but it was not considered necessary to test the wood for holding cheese, as the crates are of an open nature and would not be at all likely to damage the cheese, provided the timber were thoroughly seasoned before being used.

No difficulty was experienced in working up this timber into boxes and crates. Of course, the cost in this particular case was rather high, but this could not be taken as any criterion under the circumstances.

D. CUDDIE,
Director of Dairy-produce Division.

The Secretary of Agriculture, Industries, and Commerce.

No. 10.

Department of Lands and Survey (State Forests Branch), Canterbury,
Hanmer Springs, 9th April, 1913.

SIR,—

I enclose herewith information *re* trees growing in this district, which I trust will be of some use to you.

The figures refer to the State plantations, trees growing at St. Helens homestead, and trees that were planted in the "Spa" grounds thirty years ago.

The photos enclosed herewith are of damage done by red deer to the native forests in close proximity to Hanmer, and not more than two miles from the township. The trees damaged are *Nothopanax Colensoi*, many hundreds of which have been stripped of bark to a height of 9 ft. from the ground, the trees being now dead or in a dying condition. Within a space of less than 20 yards square I counted no less than fifteen trees damaged in the manner described, and the whole of the bush of this variety of *Nothopanax* was more or less stripped of bark by the deer. The damage was done during the heavy snowfall last winter. Note the marks of the teeth on the trees; the trunks had the appearance of having been scraped with a knife.

Many larch were damaged in a like manner in the State plantations, and in one instance a *Pinus Laricio* was completely stripped of bark.

Four sets of antlers were picked up during the spring inside the plantation-area, and one deer was shot. There is no doubt that much damage will be done in the future by these animals unless means can be devised to keep them outside the planted area. Fencing of so large an area would be out of the question. Shooting would "meet the bill," I fancy, as, after being shot at and disturbed for a season or two on the Hanmer side of the range, the deer would probably give the locality a wide berth.

I have, &c.,
W. G. MORRISON,
Nurseryman in Charge, Hanmer Springs.

The Chairman, Forestry Commission, Wellington.

No. 11.

Leslie Hills, Culverden, 7th April, 1913.

DEAR SIR,—

In reply to your inquiry *re* forest-trees grown on Leslie Hills.

In 1860 my late father brought several kinds of trees from South Australia with him; amongst them were the blue-gum, oak, ash, sycamore, elm, walnut, wattle, and flowering or prickly acacia.

In 1893 I had sawn some 11,000 ft. of the blue-gum into 5–2½ and 6–6, for sheep-yards and rough sheds. About 5 per cent. of the posts have gone at the ground, but all the rest and the rails are as sound as the day they were sawn. Any sap on the timber, of course, rotted off.

In my opinion, this class of gum is one of the most valuable timber-trees to grow on a farm, as they are fast growers, and you can cut and come again. At twenty-five to thirty years of age they are fit to saw for fencing-posts and rough sheds. I am enclosing some leaves and seed-capsules.

Insignis.

Insignis was first planted here in 1871 or 1872, and in 1893 I had a few thousand feet sawn, the same time as I had the blue-gum, and used it in several sheds. This timber was used under cover, and now appears 25 per cent. harder than when first sawn; straight and very little cracked, and no dry rot. The *insignis* is a very useful tree for a farm, as at five years old it is quite safe to allow sheep into for shelter, and it cannot be beaten for a hedge if checked at the height you want. In a few years the lower spreading branches make a great shelter for stock, and if you give sheep which are affected with lung-worm a good supply of the branches it is a certain cure, as the affected sheep greedily eat the pine-needles.

Flowering or Prickly Acacia (Robinia).

This is also a most valuable timber; in my opinion, quite equal to totara, black-pine, or kowhai, and a fast grower from the suckers. I have a gate-post which had been in the ground for fourteen or fifteen years, and the bark was not even rotted off, and none of our bench saws would touch the timber. It has a grain very similar to the kowhai. I also enclose a few leaves of the acacia.

Yours, &c.,

The Chairman, Forestry Commission, Wellington. DUNCAN RUTHERFORD.

The following are some of the measurements and ages of trees grown at Leslie Hills:—

Blue-gums planted in 1860: Greatest girth, up to 13 ft. 10 in., 3 ft. from the ground.
Blue-gums planted in 1882, 4 ft. 8 in.
Insignis planted in 1871 or 1872, 10 ft. 5 in.
Insignis planted in 1882, 8 ft. 9 in.
Wattles planted in 1861, 9 ft. 3 in.
Wattles planted in 1882, 6 ft.
Walnuts planted in 1860, 8 ft. 5 in.
Walnuts planted in 1887, 4 ft. 6 in.
Ash planted in 1861, 4 ft. 4 in.
Elms planted in 1861, 7 ft. 2 in.
Oaks planted in 1872, 4 ft. 8 in.
Sycamores planted in 1872, 5 ft. 8 in.

Special Trees.

Girth at Ground.	Height.	Useful Timber.
Blue-gum.		
10 ft.	137 ft.	72 ft.
11 ft.	152 ft.	76 ft.
Insignis.		
8 ft.	132 ft.	102 ft.
9 ft. 6 in.	141 ft.	93 ft.

No. 12.

DEAR SIR,— Hokitika, 27th March, 1913.

In accordance with the general invitation issued by your Commission, requesting written evidence on matters affecting your order of reference, I respectfully beg to submit the enclosed statement regarding the administration of timber in this district. Our long experience since the year 1872 convinces us that dealing with the timber under the regulations under the Mining Act is unsatisfactory alike to those engaged in *bona fide* sawmilling and to the Crown.

I have endeavoured to set out in a concise form the relative merits of the regulations under the Mining Act and those under the Land Act. I remain, &c.,

CAMILLE M. MALFROY,
For J. C. Malfroy and Co.

H. D. M. Haszard, Esq., Chairman, Forestry Commission.

Timber under the Warden.	*Timber under Land Act.*
Security of Title.—A miller has no security, as his rights are open to be challenged at any time, owing to a legal technicality.	*Security of Title.*—A miller would have a secure title for whatever time the Land Board thought reasonable to allow for the cutting-out of an area.
Finance.—The insecure title and no reliable asset outside plant seriously hampers necessary financing. The Warden has no power to grant the necessary time to lay the long main lines of tramway (generally of steel, and very expensive) which are now required, as the available bush lies considerable distance from established mills and Government railways.	*Finance.*—Security of title and the asset of standing bush bought for cash, being the property of the miller, provides a negotiable asset to finance on its prospective value after milling. Under the Land Act length of tramway can be considered when the time for cutting is being fixed by the Board.
Royalty. — The Crown has absolutely no security, as timber may be cut and sold, and the proceeds devoted to other purposes, before the Crown can even take legal proceedings for the recovery. In case of simultaneous working of Crown areas and freehold bush, the onus of proof of amount of royalty due to Crown rests wholly upon the Crown, whose Ranger has to be a detective.	*Royalty.*—Standing bush can be sold for cash, and millers would find no hardship to pay, as they would have the undoubted security to offer, if necessary, to finance. In cases of simultaneous cutting from Crown and freehold the Crown runs no risk of suffering loss, and therefore no objection would need to be offered to simultaneous cutting.
Cutting Operations.—There is no incentive nor necessity for a miller to work and cut anything but the best and most accessible timber, as he only has to pay for what he actually takes and sells in marketable timber, regardless of waste resulting from careless milling and other causes.	*Cutting Operations.*—Having had to pay for the whole of the timber as it stands assessed by the Crown's own officers, any timber that he leaves or wastes is his own loss, and naturally the bush will be thoroughly worked, and therefore the land will be more suitable for settlement.
Isolated Blocks of Timber.—As a miller can only hold one sawmill-area regardless of size he cannot obtain any right from the Warden to cut out small isolated blocks which are on his road to the sawmill-area, and these are therefore left, and will probably never be cut, and eventually be destroyed at loss to the Crown.	*Isolated Blocks of Timber.*—The Land Board would have power to grant special licenses for areas up to 80 acres, and this would meet the difficulty at present encountered, and mean a decided increase in revenue to the Crown.
Administration.—Wardens, as a rule, are not well versed in matters relating to practical sawmilling, and deal with all applications on purely legal lines.	*Administration.*—A Commissioner, by virtue of his field experience, must be more competent to deal equitably with sawmillers, at the same time protecting the Crown and keeping the future settlement of the land in view; he also has officers specially trained to the work.

No. 13.

Sir,— Hobson Buildings, Auckland, 25th April, 1913.

I have the honour to bring the following matter under the notice of the Commission:—

I am aware that the evidence mainly sought for by your Commission is in regard to the conservation of existing forests and the cultivation and protection of plantations of timber-producing trees, but I would venture to suggest that the threatened early exhaustion of the sources of our locally produced timber might be partially averted by encouraging farmers and landholders generally throughout the Dominion to plant quick-growing timber-trees on such portions of their estates as are unsuitable for agricultural or pastoral purposes. Nearly every farmer has areas, smaller or larger, of this character, and the systematic planting of such areas would in some twenty years or so be of great assistance in supplying local timber wants and bring a useful revenue to the next generation and to the younger members of this.

The means to this end appear to me to be the issue of circulars from the Forestry Department to such persons as had the facilities for tree-planting in the manner indicated, the co-operation of the same Department in supplying suitable young trees at cost-price, and an arrangement with the Railway Department for the free carriage of the trees to *bona fide* planters.

Speaking as one who has visited every town and hamlet in Otago and Southland, as well as having travelled extensively through the rest of the Dominion, it is deplorable to see the hundreds of farms with not a tree on the property. The reason for this neglect is not so much the ignorance of the advantage of having trees on their estates, whether it be for shelter for their stock, or the enhancement of the attractiveness of their properties, or the ultimate direct gain of having timber-trees to sell, as the feeling that it is outside their main business of farming, and that they know very little about tree-growing, while the expense of purchasing trees and the cost of carriage to their farms would involve an outlay they in many cases could ill afford.

I would respectfully submit, Sir, that the Forestry Department would be doing a great public service were they to instruct farmers and others as to what class of trees could be profitably planted, how to plant and tend them, and facilitate their obtaining them at a reasonable cost.

I have, &c.,
R. MARIS CLARK.

The President, Forestry Commission, sitting in Auckland.

No. 14.

The Chairman of the Forestry Commission, Wellington.

I BEG to submit the following as a written statement for your Commission's consideration :—

Present Forests.

I am desirous of presenting my views upon the utilization and conservation of the existing New Zealand forests.

1. *Utilization.*—It is of far-reaching importance that the Government should demand a proper and economical utilization of the present natural forests. These forests represent a big convertible asset, and, from an economic point of view, waste in production and waste by fire should be guarded against as much as possible.

The waste of timber in the process of conversion is more pronounced where the millers pay royalty on the sawn measure and where royalties are low than where royalties are high and royalty is paid on the standing measure. On the west coast of the South Island the conditions at present are particularly favourable to negligent and wasteful methods both in bushworking and milling, the reason being the system of basing royalties on *the amount of timber carried by the railway* from the respective mills.

There are many reasons why this system of ascertaining the Governments interests in a forest should be discontinued.

In the first place, when it is desirous of acquiring milling-bush, an area up to 2,000 acres can be pegged out and secured under certain conditions by any one providing a nominal deposit and being the holder of a miner's right. This slipshod method has induced more or less "gridironing," and the acquisition of bush in some cases for speculative purposes. It also gives a milling access to any bush that may be served by road, and induces a class of millers that, from a bush-utilizing point of view, are undesirable. The reason of their undesirability is that as they are at the disadvantage of having to cart their output in some cases several miles to railway-sidings, and, as they have to compete with millers who have their mills served by railway-sidings, they have to make up an increased value of their produce by producing a better class of timber, and this is done by taking only the cream of the logs and leaving logs that will produce timber of a lower market value to rot in the bush.

Then, again, the railway quantities being the base for payment, there is no check on any local sales that may be made. I do not infer that millers so situated are guilty of trading on this chance of evasion, but it gives the officer whose duty it is to collect royalty no opportunity of ascertaining any leakage that may take place in this connection.

There is also the fact that mills of more or less a bogus character are put up not for commercial purposes, but for the purpose of complying with conditions of the Act, which enables the owners of such mills to hold additional areas which otherwise they would not be entitled to.

With bush so easily obtainable and with inadequate supervision much waste is induced, and there is no guarantee to the State that the areas so secured are worked with system and economy. An examination of the areas worked reveals the fact that millers invariably take the easiest timber to win, leaving the more difficult and isolated patches, which become valueless as soon as the tramways serving them are taken up or become unusable. Cases have been known where bushmen in working flat ground have left the edge of the forest in a series of curves, with the length of the hauling-rope as their radii. Gullies and awkward corners are left because if taken out would increase the log cost, and this is naturally avoided where keen competition exists.

Then, again, no royalty is collected on timber used in mill buildings, cottages, and tramways, and although a great proportion of this class of timber is unmarketable, owing mainly to trade customs, still the fact that it is used for the purposes indicated shows that it has some commercial value, and for which the State receives no benefit.

In sawing, again, there is no restriction as to what gauge of saw the miller shall use in converting a log into sawn timber, and as the wide boards are usually produced by the big circular or breaking-down saws which generally takes a kerf of $\frac{3}{8}$ in. (which in the case of 1 in. boards represents three-elevenths or between a quarter and one-third of the whole flitch), it is easy to understand that a big loss can take place in this manner. It should also be understood that it requires a less expert sawyer to manipulate a thick saw than a thin saw. Then there is the waste of timber by careless sawing. In some cases, where orders are only for the better-class timber, the whole of the inferior quality produced is consigned to the slab fire not because it has no commercial value, but because of the millers being harassed into supplying a class of timber too good for the purpose for which it may be required. Although it is not desirable for the proper utilization of forest, there would be less objection to the miller improving the quality of the timber by this method were the State to receive proper payment for it before the waste took place.

In Auckland the State has instituted a system that seems to give it full protection, for if any loss takes place in conversion of standing timber into sawn timber the miller purchasing the standing timber has to bear such loss.

I respectfully submit that, so far as the West Coast forests are concerned, it is expedient in the interests of all to institute different methods of disposing of the timber owned by the Crown. I think if your Commission adopted some such suggestions as the following, and these were acted upon, it would bring about an infinitely better method of dealing with the indigenous forests without unduly disturbing existing trade conditions :—

(1.) That all forest areas now in the hands of the Crown suitable for milling should be reserves for that purpose, except such areas as may be deemed advisable to retain for scenic, climatic, mining, or other purposes.

(2.) That, in respect to the West Coast forests, existing millers should have the opportunity of taking up such areas as they are now entitled to under the present Act.

(3.) That in future all timber should be sold by tender on the Government estimated quantities. The assessment to be arrived at in the same manner as is now in force in the Auckland Province.

(4.) That where mills are in such a position as to be the most advantageously situated for the working of any standing timber offered for sale the owners of such mills should have preference where tendering was equal or nearly so.

(5.) That suitable terms should be given millers for the payment of timber purchased.

(6.) That systematized instructions for ascertaining the estimate of quantities of timber offered for sale be given every Ranger whose duties are to deal with the assessment of standing timber, so as to produce uniformity in dealing with all Crown timber.

(7.) That the control of the whole of the standing timber in the hands of the Crown be placed under the Lands Department.

2. *Conservation.*—The idea of retaining our forests for distant future use is economically unsound. An ordinarily matured bush has no power to provide any material increase by way of growth, inasmuch as the natural growth is barely sufficient to compensate the natural decay. This must be so, otherwise the older the forests were the greater amount of timber they would contain, when it is well known that the old forests are represented by scattered "old man" trees which yield but small quantities of timber per acre. Nature having brought the forests to the highest point of utility, it is the duty of the community to utilize. Another reason why conversion and not conservation should be adopted is that a timber-tree as usually found in our native bushes yields no current revenue. For reasons already stated, the natural growth does not count, and, apart from this, our native trees are so slow in growth that as profitable timber-producers they are failures. If an area of sapling rimus of twenty years' growth were conserved for timber purposes, and the present value were £1 per acre, and in two hundred and thirty years, which would make the age of the tree two hundred and fifty years (which time is a reasonable one for a rimu to mature), it would have to be worth about £250 per hundred feet royalty, and this allows nothing for rates, taxes, supervision, and fire risks during this long period.

The fact that royalties on the West Coast are the same now as they were fifteen years ago alone proves that forest areas are not profitable for the Government to hold. If the 6d. per hundred the Government collected fifteen years ago has produced 5 per cent. compound interest in the meantime it would now be worth a little over 1s., or, in other words, they were receiving twice the royalty fifteen years ago that they are now. To meet this on a business basis it would seem that a fair assessment of the present value should be made, and this value should be loaded with 5 per cent. compound interest up to the time of disposal. It is only by some measure like this that the State can hold its extensive national asset on commercial and business lines.

It will be seen that the earning value of native bush is nil when considered from a sawmilling point of view, its only use being to provide raw material for conversion. The only time when the profit can be accrued is when the tree is converted into the commercial commodity of sawn timber, and this can be only done once, whether it is now or in a hundred years hence. Areas of land that are under native bush and are fertile and fit for good grass-growing are losing their time in sustaining a crop which is repayable only once, and whose value (which has taken a century or two to accumulate, under present conditions is only equal to about £2 10s. per acre for the timber grown upon it, unless an earning-power is given it by increasing the royalty equivalently to the cost of holding it. I do not for one moment advocate the wholesale destruction of these forest lands, because standing timber has a further national value beyond that of royalties levied, from the fact that its conversion maintains a vast industry of great economic value.

It would seem conversion without waste and reproduction with economy should be the keynote of New Zealand forestry.

Restriction on the Export of White-pine.

The restriction of the export of white-pine in order to retain it for our own use, and because it is a timber specially suited for butter-boxes, seems unreasonable when it is borne in mind that Australia and New Zealand contribute but a small amount of butter to the world's markets compared with those countries that do not use white-pine for a package. And, again, not half the quantity of white-pine exported goes into butter-boxes ; the greater portion being used either for shelving, lining, flooring, or rough cases for fruit, rabbits, &c. To me it seems a good thing that we have an outside market for a timber which, with the exception of butter-boxes and cases, is considered a useless timber by New Zealand users. Further, I am inclined to think that sap rimu would do for butter-boxes as well as white-pine, especially if treated with paraffin-wax, as is done in some cases with white-pine. Certainly the colour would be somewhat darker, but not so dark as an oak keg.

Might I suggest that your Commission recommends that a test of the suitability of rimu sap-wood for butter-boxes be made under Government supervision.

Ruatapu, 29th April, 1913. Joseph Butler.

No. 15.

Sir,— Waihi, 29th April, 1913.

I read with considerable interest the various paragraphs which appear in the *Herald re* your researches, and your remarks on same.

During the thirteen years in which I was manager of the Matamata Estate I dealt with various modes of planting forest-trees. The English method of digging holes I condemned from the first, and it was several years before the owner handed over the arboricultural production entirely to me, after which no planting was done except on land specially prepared by the plough, and from that time there was always success.

I have heard the present system adopted on the Government plantations is 3 ft. by 3 ft. and then thin out, which is expensive and unnecessary, especially in pine plantations.

I note from your remarks that you are in favour of planting large areas of *Pinus insignis*. Well, if the Commission come to no other conclusion, and the Forestry Department carry your recommendation out, you will have conferred an inestimable boon on the country.

A plantation of 16,000 *Pinus insignis* and 40,000 *Maritima*, and another plantation of 80 acres which were planted under my direction at Matamata (and which I recommended the Waste Lands Boards to reserve when I reported on the Matamata Estate for the Government), I am told has been ruthlessly destroyed. The majority of the *Pinus insignis* were 200 ft. high and 18 in. to 20 in. through and 150 ft. without a branch, and would now be forty years old. They were planted 9 ft. by 6 ft. apart, and I did not record a single miss in the plantation.

I have a *Pinus insignis* near my residence in Cambridge 50 ft. of clean barrel, 30 ft. small knotty barrel, and 4 ft. through. The clean timber is estimated by Mr. Roache, construction engineer of the Horahora Electrical Works, to be 5,000 ft. The tree is thirty years old, probably a year less. A tree planted at the same time, and cut down when it was thirteen years old, has now 10 in. of solid heart remaining either not affected or beneficially affected by the weather. Place the solid heart of a *Pinus insignis* in the ground as a gate-post and the solid heart of an oak of the same age in the ground, and the *Pinus insignis* post will be standing good and sound when the oak has gone to decay.

There are some trees of the Californian redwood varieties growing opposite Colonel Bloomfield's property on the slopes of Mount Eden you ought to see.

Mr. Richard Reynolds has also a variety of quick-growing gum producing imperishable timber. Every seed of both trees ought to be preserved for the benefit of the future of our country.

I remain, &c.,

The Chairman, Forestry Commission. W. L. C. Williams, Cambridge.

No. 16.

Dear Sir,— Culverden, 29th April, 1913.

Mr. Wilson handed me your letter *re insignis* timber, and I will give you what information I can regarding it. I was in hopes that the Forestry Commission would have looked over my trees, as I believe it would have been worth their while.

We commenced planting *insignis* on a fairly large scale in 1873, and in 1904 a number of large ones were blown down. I got a sawmiller towards the end of 1905 to come up and saw these, and cut down some others, totalling 113,000 ft. I sold a quantity of timber from the mill at 9s. per hundred superficial feet, and charged 1s. 6d. extra for timber seasoned in the shed. In 1907 I got 60,000 ft. cut, selling most of it at 10s. 6d. In 1911 I got 132,000 ft. cut, selling at 12s. to 12s. 6d. The timber was planted in 1877.

I have to ask now from 12s. to 12s. 6d. for seasoned timber, but if purchasers would send orders to the mill it could be sold at 11s., as the cost of moving to shed, turning over, and drying in shed soon runs away with any profit. I had to pay 6s. 6d. per hundred for the mill, but if I got constant sale could afford to do it a little cheaper. I built stables and outhouses in 1905, and the timber is very satisfactory.

If I had to rebuild my own house I would use *insignis* for scantling, weatherboards, and flooring in preference to rimu, as I believe it to be immune from the borer.

Yours truly,

The Chairman, Forestry Commission. J. H. Davison.

No. 17.

Dear Sir,— School, Barr Hill, 18th April, 1913.

I beg to acknowledge your communication of the 12th instant, and am glad if I in any way gave information of value.

In pursuance of your desire, I find on inquiry and personal observation that *Pinus insignis* has proved a thoroughly reliable and stable timber where a coat of oil or paint has been applied and the timber has been built clear of the ground. Mr. Wason's buildings, thirty-seven years of age, are quite sound to-day in cases where paint has been used and the buildings are clear of the ground. Naturally there is always a shrinkage in this timber, as it is always fairly green and damp when used.

I have personally thoroughly overlooked these buildings, and only in cases where the plain boards have not had the favour of a little oil, and where the board-ends jut into the ground, have I found instability.

I also have overlooked two dwellinghouses in the vicinity, both seventeen years of age, and both almost totally *Pinus insignis*, and have found them to be quite as satisfactory (weatherproof, stable, and warm) as near-by houses of red-pine.

The best preserver of *Pinus insignis* has been found to be a coating of tar.

I am, &c.,

E. Phillips Turner, Esq., Secretary, Forestry Commission. RONALD OPIE.

No. 18.

DEAR SIR,— Barr Hill, 13th May, 1913.

In reply to yours of the 9th instant, I beg to assure you of my care and leniency in my estimating of the local *Pinus insignis* plantations. I have been to some trouble (a pleasure, believe me) to corroborate my former evidence, and find that I have been even too lenient.

In the district there are some 400 (not 200, as I placed it before, to be well on the safe side) acres of *Pinus insignis* forest; and an average yield per acre would be more than 190,000 superficial feet: Average barrel, 30 ft.; average diameter, 2 ft. to 2 ft. 6 in.; width of rows, 12 ft. or so; distance of each tree apart, 7 ft. to 9 ft.: fair average equals 200,000 superficial feet.

Plantations vary in size; but as an example of a fine, though not quite ideal one, I will mention that of Mr. McCartney. The plantation is 60 acres in area, and one which it would well reward a member of the Commission to visit. Some time ago half an acre of this area was felled and cut into timber, the royalty paid being £30. You may gauge the yield per acre from this; nevertheless, bearing in mind that the timber was cut by contract, this circumstance I find resulting in the loss of much timber quite capable of being made into useful material. I am, &c.

RONALD OPIE.

E. Phillips Turner, Esq., Secretary, Forestry Commission.

P.S.—I am not absolutely certain that the royalty paid on the ½ acre felled timber mentioned was £30. I have it from a fairly reliable person nevertheless.—R.O.

No. 19.

DEAR SIR,— Te Mata, Havelock North, 27th March, 1913.

I have received a letter from Mr. Phillips Turner asking a few questions about my eucalyptus plantations here, and I am pleased to give you my experience. The ground was ploughed about 6 in. deep from grass, harrowed twice, and chain-harrowed, and sown the end of August—4 oz. of seed was sown per acre, mixed with some dry soil; sown broadcast, using both hands and grasping with thumb and two fingers. Chain-harrowed after, and ought to have been rolled, but the land was too steep, and would have covered the seed too deeply. The seed was principally blue-gum with stringy bark, ironbark, peppermint, and other sorts. The seed was procured mostly off old blue-gum trees here and on neighbouring places where the varieties grow. The trees were begun to be thinned out when one- and two-year-olds for stakes for netting and for firewood; they grew at the rate of 7 ft. per annum for the first five years, and since have thickened in the trunk and have grown possibly 2 ft. per annum. The trees are now about 18 ft. apart in some plantations, and in others 10 ft. or 12 ft. The seed was in two plantations sown on gravelly terrace banks and in others on heavy clay land with a wet subsoil, and did best on the former soils. The altitude above the sea is 100 ft. Rainfall, from 20 in. to 40 in., the average being about 28 in.

I have used blue-gums for straining-posts and have found that when charred between wind and water (6 in. above and below ground) they outlasted totara strainers procured from the Dannevirke district—an inferior light-coloured totara. For fencing-material nothing can compare with *Robinia pseudo-acacia*, as they grow in every kind of soil from pure pumice to rich loan, and when 4 in. through will outlast totara. I have found *Acacia dealbata* and *decurrens* lasting as posts and strainers on light pumicey soils.

I raised some thousands of trees of *Catalpa speciosa* (which have a great name in the United States), and found that our spring frosts in Hawke's Bay kept them from becoming any use. They sprouted or came into leaf very early in September, and a hard frost would cut them back, and if they tried to bud again in November the same thing would happen, and they have proved useless.

For growing timber (in time) my *Pinus austriaca* and *Laricio* will prove the most valuable, I think.

Yours, &c.,

The Chairman, Forestry Commission, Wellington. B. CHAMBERS.

No. 20.

DEAR SIR,— Kanieri, 26th March, 1913.

I notice that you are inviting sawmillers to give reasons why the export of white-pine should not be stopped.

As you are aware, the land from which the white-pine at Benjamin and Mulcock's mill, Kokatahi Road, is cut off is taken up by other parties for grazing-runs, and consequently if the timber is not milled it will be felled and burned, and in such case could be of no use to any one; whereas if it is milled and exported it will bring money into the Dominion, and give employment to a considerable number of men, and also produce revenue to the Government through royalties and railage. These are the reasons why I consider the timber ought to be allowed to be exported from mills situated like this one.

As for other mills on the Coast that are cutting white-pine, most of them get some white-pine mixed with the red-pine, and if the white had to be left in the bush and only the red taken it would never pay to again go back just for the scattered white-pine.

In most places the milled-bush land is taken up for grazing-runs, and in such case the fire is set to the tops and scrub, and consequently the white-pine that was left would also be destroyed. In many places, again, it would not pay to work the red-pine unless the white could also be taken.

By the above-mentioned facts you will notice that if the milling and exporting of white-pine is interfered with it will mean that a lot of it will be destroyed and never used for any good purpose whatever, and the income to the country from its exportation would be stopped, and hundreds would be thrown out of employment. I am, &c.,

A. E. HACKELL,
Manager for Benjamin and Mulcock.

H. D. M. Haszard, Esq., Chairman, Forestry Commission, Wellington.

No. 21.

DEAR SIRS,— Tapanui, 14th March, 1913.

Re yours 10th instant: Deer of all classes do damage to the bush, eating especially the broadleaf and all succulent plants, besides horning and rubbing young trees to their destruction. Deer and cattle injure bush and destroy young trees wholesale, and therefore should be put out on the back-blocks away from civilization as far as possible or confined to areas that are enclosed with deer-proof fences.

Fencing-timber is becoming very scarce and dear, and horned animals should be kept out of bush areas as far as possible. Fires are, however, more destructive than deer, and fire wardens are needed in New Zealand on same footing as those in America. Yours, &c.,

The Forestry Commission, Christchurch. W. QUINN.

No. 22.

DEAR SIR,— Charteris Bay, 4th April, 1913.

In regard to your inquiries about *Pinus insignis*, my plantations are, on an average, 18 ft. apart. The main average of years is thirty-four; distance apart, roughly 18 ft.; height, about 100 ft.; diameter, 2 ft. The diameter is approximate, some are nearly or quite 3 ft. I have sawn a lot of them for my own use, and have sawn the backings for neighbours for fruit-cases at a cost to them of 4½d. per 30 lb. case. This price has been payable for refuse timber.

With regard to squared timber, I have used it for all purposes—gate-posts, sheep-netting stakes, weatherboards, &c.

I will take gate-posts first: They were squared 8 by 8. Eight holes (inch) were bored horizontally 6 in. apart and 6 in. deep. The posts were laid on the ground, and these holes filled with tar. They were kept filled with tar from day to day till no more tar was absorbed. Then I turned up pegs, just fitting the inch holes, and drove the pegs home. This had the effect of squeezing the tar through to the outside of the posts. I have had these posts in the ground nine years, and apparently they are as good to-day as when put in. The tops were hand painted to keep the weather out.

The sheep stakes were stood upright in tar for two weeks. Under separate cover I am sending you samples of one that has been two years in the ground. I am not sure yet whether they do not get a bit brittle under this treatment, but I think they will last for ever. They absorb so much tar that they become nearly as heavy as hardwood. It is possible that they might make indestructible railway-sleepers if steeped in tar, provided they would carry the weight.

For either boards and scantlings they make beautiful timber if painted or tarred, but they absorb a lot of oil if paint is used. If oil is dropped on an inch board in a few hours it will be showing through on the low side of the board.

Pinus insignis is, as your Commission knows, a wood full of resin when cut down. This all dries out, but evidently the channels the resin ran out of are ducts to let tar or oil run in. As you also know, it is absolutely worthless unless treated in some form, except for timber where no weather reaches it.

In my idea it is a coming timber. It will grow quickly, almost anywhere; it is good shelter; it is a striking tree; and it lends itself to the soaking-in of preservatives more than any timber I know. It looks well in inside work when planed and oiled.

I am sorry I had to write this account in a great hurry, or I might have written more on the subject.

One other item I may mention. In 1895 I planted a totara in a specially good bit of ground; it is now 21 ft. high; it was 18 in. when planted.

Had I known that information was voluntary, when your Commission sat I would have attended at Christchurch.

Any more information that I have I shall be happy to supply if required.

Yours, &c.,

The Chairman, Forestry Commission. ORTON BRADLEY.

No. 23.

DEAR SIR,— County Council Office, Mackenzie, Cheviot, 27th March, 1913.

In reply to your letter of the 19th instant, *re* plantation cut for milling purposes at Cheviot, I have to state,—

The plantation consisted of some 36 acres, comprising a narrow strip of good heavy land with a creek running through same. Planted some forty years ago. Trees were put in about 10 ft. apart, and have been thinned from time to time. The average size of trees cut, 2 ft. to 4 ft. diameter at the stump; height, up to 110 ft. Output, 600,000 superficial feet of milling-timber and some 600 cords of firewood.

The timber sold readily at 13s. per 100 superficial feet, and has been used for general building purposes (houses, woolsheds, stables, &c.). Firewood produced 15s. to 20s. per cord.

The majority of the trees were *Pinus insignis*. There were a few *muricata*, and these proved the better timber, but were considerably the smaller.

Experience has proved that the trees were planted too far apart, and this, together with the thinning, caused limbs which produced knots. Where the trees were planted thickest the best timber was obtained. I consider 4 ft. to 6 ft. apart would be sufficient.

The trees in the forty years had reached their limit of usefulness, and were going back if anything, some of the large trees being inclined to be soft. Under similar conditious thirty to thirty-five years would be sufficient to allow a plantation to grow before cutting to mill.

I have examined the timber in woolsheds and stables after being in position for three to four years, and could observe very little shrinkage, although it had been put in practically green from the log. I notice the timber absorbs a great deal of oil in painting.

The sawmiller, who is also a builder of long experience, considers the timber, when kept off the ground and painted, to be equal to rimu for general building purposes. He pays royalty of 1s. 6d. per 100 superficial feet and 5s. per cord on firewood.

Trusting the above will be of some slight service to you.

I am, &c.,
W. M. COTTRELL,
County Clerk.

The Chairman, Forestry Commission, Wellington.

No. 24.

DEAR SIR,— 450 Armagh Street East, 17th March, 1913.

I am very sorry that I cannot lay my hands on the notes I made some years ago regarding the use of *Pinus insignis* timber for butter-boxes. However, the following are the particulars. Mr. T. W. Adams, who is a member of your Commission, is familiar with the facts, although he may not be able to go into details.

I have always been impressed with *Pinus insignis* as a tree which will ultimately prove of great commercial value to the Dominion. It is admirably adapted to the climate and soils of Canterbury, in fairly good land producing timber of commercial value in thirty or forty years.

Believing that the timber of this tree would be found suitable for butter-boxes, I resolved to put it to the test. I accordingly asked Mr. Wason (of Lower Rakaia) to have a box made of this timber the same size as those in common use for the packing of butter. Mr. Wason did as I requested, selecting timber from a *Pinus insignis* which had been blown down three years previously. I kept the box in my office for a couple of months, and then sent it to the Central Dairy Company, Addington, where experiments were about to be tried with different timbers. Mr. Ellis, the then secretary, somewhat demurred at packing butter in a box made of such timber; however, after some persuasion and a guarantee against loss, it was packed in the usual way, and placed with the others in the cool chamber, where they remained for the usual time occupied in transport to England. I was present at the opening (by experts) and the testing, and had the satisfaction of hearing my box pronounced to be of excellent quality, quite equal to the best. *Pinus insignis* takes a beautiful polish.

No doubt you are aware that Mr. Giles, of Parnassus, uses a large quantity of this timber for farm and other buildings. It is said that it does not shrink nearly so much as the ordinary timber in use for house-building.

Yours, &c.,
M. MURPHY.

Mr. P. Turner, Secretary, Forest Commission, Warner's Hotel.

No. 25.

The Members of the Forestry Commission. Greymouth, 25th March, 1913.

WE respectfully beg to bring under your notice these few facts that seriously interest the sawmillers of this district, and ask you to give them your favourable consideration.

We notice that in the course of your itinerary through the Dominion the matter of placing an export duty on white-pine has been brought before you, with the idea of preventing altogether, or at least seriously limiting, the export of this timber. We would point out in the first instance that until very recently this timber was practically valueless, owing to the very limited demand for it in New Zealand, due to the ravages of the borer and the very short life of the timber in this damp climate. Latterly a demand for a small quantity for butter-boxes has arisen, but this requires only 12 in. and 14 in. boards, of which the average white-pine bush does not produce 40 per cent. to meet the severe classification to which this class of timber is subjected, no board being accepted unless absolutely free from all defects. The production of these butter-boards thus leaves 60 per cent., or more than half the log output, on the sawmiller's hands, for which no market exists in New Zealand, or, if it does, we have not heard of it. From this you will see that if the sale of white-pine were restricted to New Zealand, as it would be if an export duty were imposed, the price of butter-box timber would have to be raised to such a price as would permit of the offcuts—the 60 per cent. referred to—being destroyed.

By reciprocal arrangement with Australia, New Zealand gets red and white pine into the Commonwealth on a preferential tariff, and we are able so to dispose of the whole white-pine output as to permit the dairy industry to get its boxes at a fair rate. The State gets its royalty, and labour is employed to an extent that would be impossible were this duty imposed. An export duty on pine-logs was imposed with the avowed intention of securing to our own workers all the employment possible, and an export duty on sawn timber would more than nullify any advantage so given.

There is the further fact to be considered that most of the white-pine on the West Coast grows in company with other timbers—matai, rimu, &c. If these other timbers are taken out, and the white-pine left until New Zealand wants it, we respectfully submit that it will be totally lost to the State. Fire is certain to destroy the trees sooner or later, and a few months after they are dead they are useless for any commercial purpose. The result would be, on the one hand, loss of royalty, railage, and taxable value to the State, and loss of employment to the mill hands; on the other hand, a very large rise in the selling-price of red-pine would have to take place to compensate for the increased cost of production, caused by having to go over a very much larger area to get the same quantity of timber.

In the few places where white-pine grows alone it will usually be found to be rich river-flat. These are the most desirable areas for farming, and in view of the fact that such a small proportion of the available white-pine can be used in New Zealand our remarks apply even more forcibly here.

As men who have struggled for years and are still struggling to establish the timber industry on such a basis as will enable us to handle the forests to the very best advantage of the State, our workmen, and ourselves, we desire to make the strongest protest against any such ruinous proposal as this suggested export duty would certainly be.

There is a further matter which we would respectfully bring before you—viz., the desirability of urging on our Railway authorities the value of birch as a railway-sleeper. When the Midland Railway was laid fifteen years ago it was laid entirely with this class of timber, and some of the sleepers still remain. At present the Department pays 3s. 6d. each for silver-pine sleepers, and we understand 4s. 3d. to 4s. 6d. for hardwood. Now, sleepers of birch (*Fagus fusca*) can be obtained in large quantities at 2s. 6d. each alongside the railway-line. This would be a saving in first cost of, say, 2s. per sleeper as compared with the hardwood, and as money at 5 per cent. doubles itself in fifteen years, this 2s. saving would provide a second sleeper inside the Australian cost and also pay for placing it in the line.

Even if the Department decided to creosote birch sleepers, which can be done under 1s. each, there would be a big saving by using the birch. Another most important point is that the use of birch sleepers, even if it were maintained that there was no direct saving, would keep the whole cost of the sleeper in the Dominion, and employ a considerable amount of labour. At the same time, a timber that is among the strongest commercial timbers we have, but which has hitherto been virtually neglected and is now being largely destroyed, would be brought into its proper use, and its value as a national asset conserved.

The method of dealing with birch to-day is to take out the red and white pine and to leave the birch to its fate, which is generally fire, and we are positive it can be turned to much better account. Even if it were used on wharf-deckings and such works, instead of the Australian hardwoods, which have lately furnished many instances of their short lives, a great saving would be effected both from national and strictly commercial standpoints.

As regards afforestation, we venture to suggest that the Government be recommended to establish on the West Coast trial plantations in order to ascertain what foreign quick-growing timbers are suitable for the climate. Nothing has been done in this direction by private persons or local bodies, as is the case in other parts, and the climatic conditions render the experience of other districts unreliable. There are areas of open country where plantations could be tried to begin with, and small blocks should also be tried in country from which milling-timbers have recently been taken.

We respectfully commend the above suggestions to your favourable consideration.

For the West Coast Timber Trading Company (Limited),

J. W. Caldwell, Secretary.

E. W. Boyd, Director.

No. 26.

Gentlemen,— Lyceum Hall, Greymouth, 25th March, 1913.

Seeing you are taking evidence in Greymouth on the question of reafforestation, whilst being in favour of having the forest of the Dominion replanted as the timber is cut down so as to ensure a supply of timber in the future, I would like to bring under your notice the question of the export duty on white-pine, as suggested by the farmers of the Dominion.

I would respectfully point out to the Commissioners the injustice such a tax would impose on the wharf labourers in this and other parts of the Dominion. The export of the white-pine from this part to Australia gives a considerable amount of employment to a large number of men, and the loss to the men would be fully 25 per cent. of their earnings if a duty was put on the exportation of white-pine, making prohibitive the sale of the timber in Australia.

Trusting you will give this your earnest consideration when dealing with your report, which I presume you will lay before the Government.

I remain, &c.,

James Goodall,

Secretary.

The Chairman and members of the Forestry Commission.

No. 27.

NOTE ON THE GRASS-GRUBS FOUND IN THE STATE NURSERIES.

[By A. H. COCKAYNE, Biologist, Department of Agriculture.]

UP to the present time, with certain isolated exceptions chiefly of a non-parasitic nature, such as frost and fires, the main pathological troubles that have had to be contended against in the State afforestation-work have been incurred during the nursery part of the operations.

The most serious of these has been the really considerable loss that has occurred through the ravages of a group of beetles belonging to the endemic genus *Odontria*, which in the larval condition is popularly referred to as the grass-grub.

During the past season it has been stated that in the Rotorua Nursery alone three-quarters of a million larch seedlings and two-year-old plants have been destroyed. This is in itself sufficient to demand the thorough control of these insects in the nursery beds; but there is another and more serious aspect than the mere killing of the plants, and that is the increased price per thousand of the surviving ones will seriously affect the final cost of the mature lumber, especially if the trees are employed for the production of large timber and the rotation of the crop is at all extended.

In forest-tree pathology the most serious losses often occur during the nursery operations, as in most cases the effects are epidemic in their nature, and a total loss of the affected individuals takes place. In growing and standing timber the effects of disease, although apparently more serious from a monetary point of view, can generally be checked by the adoption of methods that mean the elimination of the centres of infection. In the case of trees that are not of marketable size the removal of diseased ones, although an expensive operation, often has but little injurious effect on the ultimate yield, as the number employed per acre presupposes the elimination of a large percentage of those originally planted. With regard to marketable-sized trees, the evil effects of plant-diseases can be often largely obviated by the disposal of the timber before the disease secures too strong a hold, thus tending to remove the centres of infection and at the same time securing some appreciable return from the affected individuals.

It can thus be seen that the guarding of the nursery beds against insect and fungus invasion becomes an essential feature in the nursery work, and the recent effects of the various species of "grass-grubs" indicates clearly the urgent necessity for their suppression, even if the cost may be quite considerable.

For some time I was under the impression that the species responsible for the trouble was the ordinary grass grub, *Odontria zealandica*, but recent researches show that the one attacking the North Island nurseries is the newly described *Odontria puncticollis*. This insect is fully described and figured in the March number of the *Agricultural Journal*. In the South Island, so far as my observations go, I am inclined to think that *Odontria striata* is the main cause of damage. Great care has been taken by the nurserymen in charge to sow only on apparently clean land, and that the infection has in nearly every instance taken place through egg-laying occurring in the beds after the seed has germinated and the seed-frames removed.

At Rotorua larch has been mainly attacked, and *Pinus Laricio* has apparently escaped damage, but in the South Island such is not the case; but one must remember that in each locality it is a different species that is the causative agent. The larvæ completely eat through the roots, and plants that are attacked quickly succumb, being apparently unable to develop fresh roots sufficiently quickly to replace those that are destroyed.

It is, of course, impossible to give any definite information on the line of action that should be adopted until such time as the full life-history of all the species that are responsible for the damage has been worked out. However, it can safely be asserted that if egg-laying can be prohibited on the nursery beds during the summer following the sowing of the seed the effects of the grass-grub can be kept down to a minimum. So far as the nursery beds are concerned, this does not appear to be at all impracticable, provided the times and duration of egg-laying are accurately known. With regard to *Odontria puncticollis*, the main flights appear to take place during February and March, and the same is apparently true of *Odontria striata*, while with *O. zealandica* it is in November and December that the majority of the female beetles are on the wing. It has been proposed to make the present seed-frames beetle-proof, and keep them covered over the beds until any danger of egg-laying is over. Mr. Goudie has suggested certain modifications on the way that the scrim is at present used on the frames which would enable it to be removed during the daytime and replaced every evening without any undue expenditure of labour. In this way the injurious effects of keeping the young plants covered over during a portion of the summer will be avoided.

It is a very significant fact that so far as our present knowledge goes the ordinary grass-grub, *Odontria zealandica*, rarely causes any appreciable damage in the State nurseries. I am confident that this is due to the fact of the seed-frames being kept normally on the beds until after the main egg-laying of that species is completed. Of course, *O. zealandica* has at times been found in considerable numbers in the nursery beds, but the present seed-frames are by no means insect-proof, although they could easily be made so.

Soil fumigation and spraying may also play an important part in the control of the subterranean insects affecting the nursery beds, and experiments are proposed to be carried out in these directions. However, so soon as there are full particulars as to the exact times that the egg-laying of the various species takes place I am sure that the screening of the beds during these crucial portions of the year will provide an efficient and practical means of control.

I would here like to express my obligation to Mr. Goudie and Mr. Robinson for the really excellent notes they have provided me regarding various phases of the life-histories of the species that they have had under observation.

APPENDIX D.

SCHEDULE OF MEASUREMENTS OF TREES GROWING IN NEW ZEALAND PLANTATIONS.

Name of Tree.	Age.	Girth at 5 ft. from Ground	Approximate Height in Feet.	Locality	Distance from Sea.	Height above Sea-level	Quality of Soil.	Whether Grown in an Exposed or Sheltered Situation	Measured by	Remarks.
	Years.				Miles.	Ft.				
Eucalyptus numerosa	..	28¼ in.	..	Waitati	½	100	Clay	Sheltered	Phillips Turner	On margin of clump of self sown trees.
,,	..	20½ in.	..	,,	½	100	,,	..	,,	
,,	..	9½ in.	..	,,	½	100	..	..	..	In middle of same clump.
,,	..	26 in.	..	,,	½	100	..	..	,,	
European larch	..	9½ in.	15	Gimmerburn	10	..	..	..	..	Interior of plantation.
..	..	8½ in.	14	..	..	1,200	..	..	,,	..
,,	15	24 in.	30	Te Kape	48	2,500	Small gravel from schist		..	Interior of plantation.
,,	15	19½ in.	25	,,	48	..		..	..	
Pinus radiata	15	43½ in.	..	..	48	2,500	Ditto	..	..	,,
,, austriaca	15	23½ in.	..	..	48	2,500	,,	,,	..	,,
Pinus Murrayana	25	46 in.	50	Greendale	30	400	Good	..	,,	Interior of belt.
Pseudotsuga Douglasii	30	57 in.	70	,,	30	400	,,	,,	..	..
Pinus radiata	40	11 ft. 6 in.	123	..	30	400	..	..	T. W. Adams	Exterior of plantation.
Eucalyptus viminalis	17	26 in.	60	Rotorua	50	1,000	Pumiceous	..	Phillips Turner	Interior of plantation.
,,	17	41 in.	60	,,	50	1,000	..	,,	..	Exterior of plantation.
Robinia pseudo-acacia	20	39 in.	30	Whangarei	10	40	Alluvial	,,	,,	..
Cupressus macrocarpa	..	8 ft. 8 in.	70	Auckland	½	20	..	,,	T. W. Adams	..
,,	..	7 ft. 8 in.	70	..	⅓	20	,,	,,	,,	..
Eucalyptus globulus	56	12 ft. 11 in.	60	Parawanui	6	20	Sandy loam	Exposed position	C. Murdoch	..
,,	45	12 ft. 10 in.	58	..	6	20	..	..	,,	..
Robinia pseudo-acacia	..	2 ft. 4 in.	40	..	6	20	..	..	,,	..
Pinus radiata	..	7 ft. 8 in.	150	Pickwick Plantation, near Wanganui	8	250	..	..	,,	..
,, ponderosa	..	10 ft. 6 in.	..	St. John's Hill, Wanganui	5	230	..	..	,,	Could only see the stump of the tree, having been felled some years.
Cupressus sempervirens	..	3 ft. 6 in.	45	,,	5	230	..	..	,,	
,,	..	2 ft.	45	,,	5	230	,,	..	,,	
Eucalyptus Macarthuri	35	6 ft. 10 in.	100	Treearne, Cambridge	50	230	Good soil	..	S. I. Clark	..
,,	35	6 ft. 8 in.	100	,, ,,	50	280	..	..	,,	..
,,	39	14 ft. 7 in.	..	..	50	280	..	..	,,	..
Araucaria excelsa	..	11 ft. 8 in.	125	Tauranga	1	30	Modified pumice	..	,,	..
,, Bidwilli	about 60	6 ft. 3 in.	60	..	1	30	,,	..	,,	..
,, Elm	,, 60	2 ft. 6 in.	60	,,	1	30	..	..	,,	..
,, ,,	70	10 ft. 2 in.	80	..	1	30	..	..	,,	..
Populus tremula	..	17 ft. 7 in.	80	..	100 yds	14	..	..	,,	Supposed to be the largest in New Zealand.
Black walnut	..	5 ft. 7 in.	..	..	100 yds	14	..	..	,,	..
Eucalyptus globulus	45	7 ft. 6 in.	115	Hillersden Estate, Marlborough	15	..	Good soil	..	H. D. M. Haszard	..
,,	45	9 ft. 9 in.	115	Ditto	15	..	..	..	,,	..
,,	45	9 ft.	115	..	15	..	..	,,	,,	..
,,	45	5 ft.	115	..	15	..	,,	,,	,,	..
Pinus radiata	30	9 ft.	90	Queenstown	..	1,100	Mica schist gravel	Sheltered	T. W. Adams	..
Larix europæa	25	4 ft. 9 in.	45	..	..	1,100	Ditto	..	,,	..
Poplar	30	8 ft. 6 in.	70	..	..	1,100	..	,,	,,	..
Pinus radiata	30	11 ft. 2 in.	100	Ruakura	25	141	Good	Rather exposed	Phillips Turner	..
Eucalyptus Macarthuri	30	9 ft. 10 in.	90	..	..	..	..	,,	..	..
,,	27	9 ft. 10 in.	123	,,	..	..	..	,,	..	..

Agathis australis	..	37 ft. 3 in.	..	Puhipuhi	..	..	..	..	..	Dead tree.
Gleditschia triacanthos	..	8 ft. 7 in.	50	Hokianga	..	..	Good	Rather exposed	..	..
Ulmus montana	..	8 ft. 6 in.	50	Pakaraka	..	..	,,	Exposed	Phillips Turner	..
Wellingtonia gigantea	40	12 ft. 1 in.	80	Queenstown	..	..	Fair	Rather exposed	T. W. Adams	These trees looked very healthy, and were well grown.
Eucalyptus globulus	9	3 ft. 6 in.	50	,,	..	..	,,	,,	,,	
,,	..	11 ft. 7 in.	85	,,	..	..	,,	,,	,,	
Eucalyptus viminalis	..	9 ft. 3 in.	..	,,	..	..	,,	,,	,,	
Eucalyptus globulus	..	16 ft. 3 in.	80	Warepa	..	..	Good	Sheltered	,,	Tree not very high.
,,	..	6 ft.	150	Fendalton, Christchurch	..	..	Very good	,,	Phillips Turner	Humphrey's Plantation. Very fine trees, the finest seen.
,,	..	5 ft. 11 in.	150	,, ,,	..	..	,,	,,	,,	
,,	..	4 ft. 4 in.	150	,, ,,	..	..	,,	,,	,,	
,,	..	11 ft.	90	,, ,,	..	..	,,	,,	,,	Isolated, branchy.
Larix europæa	40	3 ft. 5 in.	..	Bangor	..	..	Good	Formerly exposed	,,	Bangor trees of poor quality.
,,	40	2 ft. 11 in.	..	,,	..	..	,,	,,	,,	
Populus canescens	40	2 ft. 11 in.	..	Homebush	..	..	Very good	Sheltered	,,	..
,,	..	1 ft. 10 in.	..	,,	..	..	,,	..	,,	The smaller trees from suckers.
,,	..	1 ft. 4 in.	..	,,	..	..	,,	..	,,	
,,	40	6 ft. 5 in.	..	,,	..	..	,,	..	30 ft. clear hole	
Pseudotsuga Douglasii	40	4 ft. 6 in.	80	,,	..	..	..	..	,,	Trees the finest seen by us of larch.
Larix europæa	40	4 ft. 6 in.	80	,,	..	..	..	..	..	
,,	40	3 ft. 10 in.	80	,,	..	..	..	..	,,	
Pinus ponderosa	40	6 ft. 8 in.	100	,,	..	..	..	..	,,	
Cupressus macrocarpa	23	7 ft. 8 in.	..	Cambridge	..	..	..	..	S. I. Clarke	..
Eucalyptus	38	6 ft. 10 in.	120	,,	..	..	..	..	..	These are fine specimens.
,,	38	6 ft. 8 in.	120	..	..	..	..	..	..	..
Cupressus macrocarpa	24	6 ft. 6 in.	..	Tauranga	..	..	..	Modified pumice	..	..
Populus fastigiata (Lombardy poplar)	40	9 ft. 5 in.	80	Christchurch	7	15	Good	Fairly sheltered	T. W. Adams	Planted for ornament. Six measured in succession out of nineteen trees in the line.
Ditto	40	11 ft. 1 in.	80	,,	7	15	,,	,,	,,	
,,	40	10 ft. 1 in.	80	,,	7	15	,,	,,	,,	
,,	40	11 ft. 4 in.	80	,,	7	15	,,	,,	,,	
,,	40	10 ft. 5 in.	80	,,	7	15	,,	,,	,,	
,,	40	11 ft. 11 in.	80	,,	7	15	,,	,,	,,	
Eucalyptus hæmastoma	14	2 ft. 4 in.	45	Whakarewarewa	50	1,000	Pumice	Exposed	..	These are planted as experimental trees, and are good object-lessons.
Eucalyptus Gunnii	14	3 ft. 2 in.	55	,,	50	1,000	,,	..	..	
Eucalyptus corymbosa	14	3 ft. 7 in.	55	,,	50	1,000	,,	..	..	
Eucalyptus gigantea	14	2 ft. 11 in.	55	,,	50	1,000	,,	..	..	
Wellingtonia gigantea	14	10 ft. 3 in.	65	,,	50	1,000	,,	..	..	..
Larix europæa	12	1 ft. 9 in.	30	,,	50	1,000	,,	..	..	..
,,	12	2 ft. 1 in.	32	,,	50	1,000	..	..	..	..
Agathis australis	20	1 ft. 10 in.	35	Te Aroha	20	1,000	..	..	..	..
Pinus radiata	30	7 ft. 2 in.	125	,,	20	1,000	..	,,	..	..
Wellingtonia gigantea	40	6 ft. 3 in.	75	Thames	..	..	..	Sheltered		These trees planted by Mr. Hall serve perhaps as no others in New Zealand to illustrate the rate of growth of some exotic trees in comparison with our own native forest-trees.
Agathis australis	40	2 ft. 4 in.	60	,,	..	..	..	,,		
,,	40	1 ft. 9 in.	45	,,	..	..	..	,,		
Dacrydium cupressinum	40	2 ft. 3 in.	45	,,	..	..	..	,,		
Libocedrus Bidwillii	40	1 ft. 11 in.	30	,,	..	..	..	,,		
Podocarpus totara	40	2 ft. 9 in.	33	,,	..	..	..	,,	..	..
,,	40	3 ft. 4 in.	40	,,	..	..	..	,,	..	..
Retinospora obtusa	40	2 ft. 6 n.	25	,,	..	..	..	,,	..	..
Cupressus torulosa	40	5 ft. 7 in	40	,,	..	..	..	,,	..	Tree dying.
Podocarpus spicatus	40	1 ft. 1 in.	20	,,	..	..	..	,,	..	..
Phyllocladus trichomanoides	40	1 ft. 9 in.	20	,,	..	..	..	,,	..	..
Podocarpus ferrugineus	40	1 ft. 3 in.	25	,,	..	..	..	,,	..	..
Fraxinus excelsior	40	3 ft. 5 in.	45	,,	..	..	..	,,	..	..
Quercus robur	40	6 ft. 11 in.	53	,,	..	..	..	,,	..	Favourable situation.
Podocarpus dacrydioides	50	2 ft.	40	,,	..	..	..	..	..	..

MINUTES OF PROCEEDINGS.

Wellington, Wednesday, 26th February, 1913.

The first meeting of the Forestry Commission was held at the Legislative Council at 3 o'clock p.m.

Present: Henry Douglas Morpeth Haszard, F.R.G.S., Commissioner of Crown Lands and Chief Surveyor of the Westland Land District; Thomas William Adams, farmer, of Greendale, Canterbury; Samuel Isaac Clarke, builder, Ponsonby, Auckland; Leonard Cockayne, F.R.S., F.L.S., Ph.D., of Christchurch; Frank Yates Lethbridge, farmer, Makino Road West, Feilding; and Charles Primrose Murdoch, woodware manufacturer, Auckland.

The Secretary read the Royal Commission.

The Prime Minister attended and addressed the Commissioners on the subject-matter of the Commission.

On the motion of the Chairman, a vote of thanks was tended the Prime Minister for his address.

The Chairman then reviewed the questions outlined in the Commission, and Mr. Clarke also addressed the Commission on the subject generally.

It was resolved that the Commission visit the South Island first, leaving Wellington the night of Friday, the 28th, and proceeding to Invercargill.

It was also resolved that only in exceptional cases should oral evidence be taken, and that any association or person desiring to tender evidence should be requested to put it in writing, when it would receive the careful consideration of the Commission; all such communications to be sent to the Commission, care of the District Survey Office in each centre.

It was further resolved that the official reporter be authorized to give a *résumé* to the Press Association of the proceedings of the Commission for publication.

The Commission adjourned at 4.45 p.m.

Wellington, Thursday, 27th February, 1913.

The Commission met at 10 a.m., at the Legislative Council Committee room, at 2 o'clock.

All the members were present.

The minutes of the previous meeting were read and confirmed.

An interesting letter was read from Mr. A. Bathgate, of Dunedin, concerning afforestation.

A letter was read from Messrs. Humphreys Bros., with regard to bush being milled before Crown land is opened for settlement.

A letter from the Under-Secretary for Crown Lands was read, with reference to the abandonment of the Dumgree Plantation, and the Nurseryman's report thereon.

The Commission were engaged till the evening in further fixing the itinerary.

The Commission met again at 7.30 p.m., and continued and finished the itinerary scheme.

The Commission adjourned at 9.30 p.m.

Wellington, Friday, 28th February, 1913.

The Commission met again at the Legislative Council, at 10.30 a.m., and finally approved the itinerary as drawn up.

All the members were present.

The minutes of the previous meeting were read and confirmed.

The Commission adjourned at 1 p.m.

Invercargill, Monday, 3rd March, 1913.

The Commission met at the Government Buildings, Invercargill, at 10 a.m.

Present: All the members of the Commission.

The Commission adjourned to visit the powellizing works for the treatment of railway-sleepers at Kew, and were shown over the works, and had the process explained to them by the manager.

The Commission met again at 2 p.m.

William Mosley Andrews and John Walker, representing the Southland Builders' Association, attended and gave evidence.

Gordon H. M. McClure, Commissioner of Crown Lands for the Southland Land District, and James Collins, Crown Lands Ranger and Timber Expert for the Lands Department, were also examined.

In re Bluff Hill proposed scenic reserve: The Commisioner of Crown Lands was examined as to the state of this matter, and it was resolved that the question was one to be dealt with by the Scenery Preservation Board, and that the Commission proceed no further with the matter.

The Commission adjourned at 5.30 p.m., after having resolved that the Press be admitted to public sittings.

TAPANUI, FRIDAY, 7TH MARCH, 1913.

The Commission met at 7 p.m., having on 6th March inspected the Government nursery at Tapanui, under the guidance of Mr. Robinson, the Nurseryman in Charge.

All the members were present.

The minutes of the previous meeting were read and confirmed.

A letter was read from the Queenstown Borough Council with regard to afforestation in that district.

It was resolved to thank the Councillors for their letter, and express regret that owing to shortness of time the Commission should not visit the town.

A letter from the Winton Borough Council was read asking the Commission to move in the matter of a reserve on the north-west boundary of the town.

Resolved, That the Council be informed that the matter is outside the scope of the Commission, as land referred to is private land.

A letter from the Prime Minister, enclosing a letter from Mr. J. W. Ellis, of Hamilton, *re* white-pine industry and afforestation generally, was read.

It was resolved to recommend for reservation and climatic purposes Black Gully and all the forest clumps on steep slopes of the range to the east of Tapanui; details of boundaries to be left till an examination could be made of the maps at Dunedin.

In connection with the above resolution, it was further agreed that the country referred to be used as an experimental site for the purpose of planting exotic trees therein, seeing that it lay so near to the State nurseries.

The Commission adjourned at 8 p.m.

DUNEDIN, MONDAY, 10TH MARCH, 1913.

The Commission met at the District Lands Office at 10 a.m.

All the members were present.

The minutes of the previous meeting were read and confirmed.

Mr. Statham, M.P., attended and asked that the land along the Tahakopa River, in Block XIII, Rimu Survey District, should be reserved for scenery-preservation purposes.

It was resolved, on the motion of the Chairman, That Mr. G. H. Stewart, of Tapanui, and other prominent farmers be asked to furnish their views in writing on the question of the damage done to plantations by the imported deer.

The Commission adjourned at 12 noon.

DUNEDIN, TUESDAY, 11TH MARCH, 1913.

The Commission met at 10 o'clock a.m.

All the Commissioners were present.

The minutes of the previous meeting were read and confirmed.

Mr. A. S. Malcolm, M.P., wrote asking the Commission to visit Catlin's River district, and inspect certain gum-plantations growing there.

It was decided that, owing to pressure of time, the Commission could not visit there, but would be glad to receive all particulars, photographs, &c., of the trees from the settlers interested.

A letter was read from the Prime Minister, enclosing one from Mr. Seddon, M.P., on the subject of the timber industry, &c., in Westland.

The Chief Health Officer wrote intimating his willingness to address the Commission on the question of planting trees as an occupation for outdoor consumptive patients.

It was resolved to hear the Chief Health Officer's evidence in Wellington.

It was resolved to ask the Mayor of Dunedin to allow the Superintendent of City Reserves to furnish the Commission with data as to the cost of tree-planting in the Corporation reserve.

Mr. G. M. Thomson, M.P., intimated that he was forwarding a statement of his views on afforestation to the Commission.

A telegram was received from Mr. Statham, M.P., suggesting the reservation of the banks of the Waipori Stream. It was decided that the matter was one for the Scenery Preservation Board.

The following witnesses gave evidence:—

A. Bathgate, Dunedin.

William Campbell, assistant Corporation gardener, Dunedin.

G. W. Macintosh, president of the Acclimatization Society.
A. Cowie, secretary of the society.
Gabriel Hodges and James Knox, representing the Otago Builders' Association.
E. H. Wilmot, Commissioner of Crown Lands.
E. O'Neill, Crown Lands Ranger.
J. R. Scott, secretary, Otago Dairy Association.
A. S. Ross, Dairy Instructor and Butter Grader.
The Commission adjourned at 4 p.m.

FAIRLIE, SATURDAY, 15TH MARCH, 1913.

The Commission held a sitting here at noon, having journeyed from Dunedin *via* Ranfurly, Cromwell, and the Mackenzie Plains. On the 12th and 13th March they inspected the Naseby and Gimmerburn Plantations and the Ranfurly Nursery. At Fairlie on the above date the evidence of Mr. R. L. Banks, engineer to the Mackenzie County Council, was taken regarding the county's plantations.

The Commission then proceeded to Christchurch.

CHRISTCHURCH, TUESDAY, 18TH MARCH, 1913.

The Commission met at 9.30 a.m., at the Lands Office.
All the Commisioners were present.
The minutes of the previous meeting were read and confirmed.
Letters were read from Mr. M. Murphy on afforestation and the value of *Pinus radiata*.
The following witnesses attended, and gave evidence :—
Edward Herring, retired farmer, Papanui.
Richard P. Grady, of A. M. Grady and Co.
J. C. Helmore.
H. G. Ell, M.P.
John H. Maynard.
Dr. Morton Anderson.
Professor Charles Chilton, D.Sc.
Robert Nairn, nurseryman.
W. B. Buckhurst, Crown Lands Ranger.
H. S. Price, Chief Draughtsman, Canterbury Land District.
John Dryden Hall, farmer, Hororata.
The Commission adjourned at 4.30 p.m.

On the 19th and 20th March the Commission inspected the State nursery and plantations at Hanmer.

HOKITIKA, MONDAY, 24TH MARCH, 1913.

The Commission met at the Lands Office at 7.30 p.m.

Letters were read from Hon. F. M. B. Fisher, *re* scenic reservation at Ruawai, Kaipara; A. N. Harrop, on growth of native trees; J. G. Wilson, *re* the planting of sand-dunes; H. E. Pacey, of the National Dairy Association, Auckland; and W. B. Leyland, regarding butter-box tests.

The Commission adjourned at 8.30 p.m.

GREYMOUTH, TUESDAY, 25TH MARCH, 1913.

The Commission met at the Courthouse at 10 a.m.

All the Commissioners were present.

The minutes of the previous meeting were read and confirmed.

Messrs. G. H. Boyd and J. W. Caldwell, director and secretary of the West Coast Sawmillers' Association, attended and handed in a statement dealing with the export of white-pine and the use of red-beech as a timber for sleepers.

The Commission adjourned at 11 o'clock a.m., and proceeded to Reefton, examining *en route* Mr. A. Whitehorn, Crown Lands Ranger for the South Nelson District.

NELSON, THURSDAY, 27TH MARCH, 1913.

The Commission met at the Municipal Chamber at 10 a.m.

All the members were present.

The minutes of the previous meeting were read and confirmed.

A letter was received from the Greymouth Wharf Labourers' Industrial Union of Workers regarding the prohibition of the export of white-pine.

The following witnesses attended and gave evidence:—

John Pollock, chairman, Acclimatization Society.

F. A. Thompson, Commissioner of Crown Lands, Nelson.

James S. Evans, Stipendiary Magistrate and Warden.

Frederick G. Gibbs, M.A.

R. E. Harris, Crown Lands Ranger.

The Commission adjourned at 1 p.m.

BLENHEIM, SATURDAY, 29TH MARCH, 1913.

The Commission met at the Crown Lands Office at 10 a.m., having the previous day inspected the Dumgree Plantation.

All the members were present.

The minutes of the previous meeting were read and confirmed.

The following witnesses attended, and gave evidence:—

W. H. Skinner, Commissioner of Crown Lands, Marlborough.

H. F. Hursthouse, Crown Lands Ranger.

William Masefield.

John Fawcett.

The Commission adjourned at 11.15 a.m.

WELLINGTON, MONDAY, 31ST MARCH, 1913.

The Commission met at the Government Buildings at 10 a.m.

Present: All the Commissioners.

The minutes of the previous meeting were read and confirmed.

Letters were received from Messrs. G. M. Thomson, M.P., B. Chambers, the South Canterbury Builders' Association, the Mackenzie County Council, Ashburton County Council, and James Collins (Crown Lands Ranger, Invercargill), regarding afforestation matters.

The itinerary for the North Island was decided on.

The Commission adjourned at 5 p.m.

NAPIER, THURSDAY, 3RD APRIL, 1913

The Commission met at the Lands Office at 10 a.m.

Present: All the members.

The minutes of the previous meeting were confirmed.

Letters were received from Messrs. A. E. Hackle and Camille Malfroy regarding forestry questions.

The following witnesses were then examined:—

Robert Thomas Sadd, Commissioner of Crown Lands, Hawke's Bay.

Henry Martin Smith, Crown Lands Ranger.

John Griffin, president, Napier Builders' Union.

Mr. Ward, member of Napier Builders' Union.

The Commission adjourned at 12.45 p.m.

AUCKLAND, SATURDAY, 12TH APRIL, 1913.

The Commission met at the Lands Office at 11 o'clock.

The minutes of the previous meeting were read and confirmed.

The Chairman reported that a subcommittee had, on the 4th April, visited the forest reserve at Lake Waikaremoana; that on the 7th April the full Commission had inspected the State nurseries and plantations at Waiotapu and Waipa; and that on the 8th April an inspection was made of the State nurseries at Whakarewarewa.

It was resolved to apply to the Government for a month's extension of the Commission.

Dargaville, Tuesday, 15th April, 1913.

The Commission met at the Courthouse at 10 a.m.

The minutes of the previous meeting were read and confirmed.

Letters were received from E. Hardcastle, regarding destruction of the forest by deer; and from the Prime Minister, forwarding a communication from Mr. Ell, M.P., on the subject of scenic reservations.

The following witnesses attended, and gave evidence:—

Francis J. Dargaville.
William T. Hunt.
Peter Brown.
John H. McCarroll.
Edwin Harding.
Wolsley Allen.
James Maxwell, caretaker of the Waipoua Forest.

The Commission adjourned at 4 p.m.

Auckland, Wednesday, 23rd April, 1913.

The Commission met at the Government Buildings at 10 a.m.

All the members were present.

The minutes of the previous meeting were read and confirmed

The Chairman reported that on 16th April the Commission had journeyed to the Waipoua Forest, and on that date and the 17th April had proceeded right through the forest reserve. He mentioned that on the 21st April the Puhipuhi Forest had been inspected, and that during the Commission's stay at Whangarei Mr. Lionel Hamlon had interviewed the members on behalf of the Whangarei Fruitgrowers' Association, urging the advisability of State planting to meet the future requirements of the fruit industry.

The Commission adjourned at 12 noon.

Auckland, Thursday, 24th April, 1913.

The Commission met at 10 a.m., all the members being present.

The minutes of the previous meeting were read and confirmed.

The following witnesses gave evidence:—

David Goldie, timber-merchant.
William Arthur Cumming, architect, the president of the Auckland branch, New Zealand Institute of Architects.
William B. Leyland, timber-merchant.
David Hay, nurseryman.
August Charles Koch, District Engineer, New Zealand Railways.
Henry Paul Kavanagh, retired Civil servant.
Robert Craig Pollock, Government timber-measurer.
Edward Bartley, architect.
James Trounson, sawmiller.
Dr. McGill, District Health Officer.
Alexander McColl, timber-merchant.
William Johns, member of Auckland Land Board.
Harry M. Skeet, Commissioner of Crown Lands, Auckland.

The Commission adjourned at 5 p.m.

On the 26th April a subcommittee, consisting of Messrs. Haszard (Chairman) and Lethbridge, journeyed *via* Mahoenui to Mokau, and thence to New Plymouth.

The same day the other members of the Commission proceeded *via* Taumarunui to Pipiriki.

Both parties inspected proposed reservations along the banks of the Mokau and Wanganui Rivers respectively.

The Commission arrived at New Plymouth on 28th April.

New Plymouth, Wednesday, 30th April, 1913.

The Commission met at the Borough Council Chamber at 10 a.m., all members being present.

The minutes of the previous meeting were read and confirmed.

A deputation consisting of Messrs. W. A. Collis and R. C. Hughes (representing the Egmont National Park Board) attended and gave evidence.

The following witnesses were also examined :—
T. C. List, chairman of Taranaki Expansion League.
Clement W. Govett, solicitor.
George H. Bullard, Commissioner of Crown Lands for Taranaki.
John Johnston, Dairy-produce Grader.
H. J. Okey, M.P.
Charles Ahier, timber-merchant.
The Commission adjourned at 2.45 p.m., and next day proceeded to Wellington.

WELLINGTON, FRIDAY, 2ND MAY, 1913.

The Commission met at Parliament Buildings at 2 p.m.

The minutes of the previous meeting were read and confirmed.

Letters were received from Messrs. W. A. Banks, Medbury; J. H. Hudson, Hoteo; T. Thompson, Westport; T. Harle, Oxford; and J. Butler, Ruatapu, on the subject of the inquiry.

The Commission proceeded to consider the drafting of the report.

WELLINGTON, SATURDAY, 3RD MAY, 1913.

The Commission met at 10 a.m.

Mr. Adams was authorized to return to the South Island, and to report on Conical Hills Plantation, which the Commission had been unable to visit on account of bad weather.

Messrs. Murdoch, Clarke, and Lethbridge were appointed a subcommittee to inspect and report on the reserves at Swanson, Henderson, Wade, and Okura.

The Chairman, Dr. Cockayne, and the Secretary were authorized to proceed with the preparation of the draft report.

WELLINGTON, THURSDAY, 15TH MAY, 1913.

The Commission met at 10 a.m., all the members excepting Mr. Adams being present.

The minutes of the previous meeting were read and confirmed.

A letter was received from the Under-Secretary for Lands enclosing the Governor's Warrant extending the Commission to the 31st May.

Letters were also read from several other persons concerning matters being inquired into by the Commission.

Kenneth W. Dalrymple, farmer, Rangitikei, attended and gave evidence.

The Commission adjourned at 3.15 p.m.

WELLINGTON, FRIDAY, 16TH MAY, 1913.

The Commission met at 10 a.m., all the members being present except Mr. Adams.

The minutes of the previous meeting were read and confirmed.

Mr. John MacPherson handed in a written statement of his views on value of shelter and other plantations.

The following witnesses were sworn, and gave evidence :—
William Henry Bennett, representing the executive of the New Zealand Federation of Builders.
Professor H. B. Kirk, professor of biology at Victoria College.
Dr. Valintine, Inspector-General of Hospitals.
A Hamilton, F.R.G.S., Director of the Dominion Museum.
Dr. A. K. Newman, M.P.
H. A. Goudie, Superintending Nurseryman for the North Island.
George G. Schwartz, president of the Wellington branch of the New Zealand Institute of Architects.
David Cuddie, Director of the Dairy-produce Division of the Department of Agriculture.
Winnard M. Singleton, Assistant Director of Dairy-produce Division of the Department of Agriculture.

The Commission adjourned at 4.45 p.m.

WELLINGTON, MONDAY, 19TH MAY, 1913.

The Commission met at 10 a.m.

All the members were present excepting Mr. Adams.

The minutes of the previous meeting were read and confirmed.

It was resolved that, as it was difficult to discriminate as to its relative value, the whole of the evidence, as reported, be printed.

The following persons attended, and gave evidence :—

G. C. B. Jordan, Under-Secretary for Justice.
Dr. Frank Hay, Inspector-General of Mental Hospitals.
James Burnett, Chief Engineer, Government Railways.
W. H. Field, solicitor.
C. A. Cotton, lecturer on geology at Victoria College.
L. O. Tripp, president of the Wellington Acclimatization Society.
G. P. Newton, Assistant Under-Secretary, Internal Affairs.

The Commission then considered and accepted various parts of the draft report, and adjourned at 5.30 p.m.

WELLINGTON, WEDNESDAY, 21ST MAY, 1913.

The Commission met at 10 a.m.

All the members were present.

The minutes of the previous meeting were read and confirmed.

The subcommittees that had been appointed to pay special visits to certain localities presented their reports.

Messrs. Lethbridge, Clarke, and Murdoch were appointed a subcommittee to visit the sand-dune areas on the west coast, near the Rangitikei River; and also to proceed to Wanganui, to have a further interview with the local residents as to forest-preservation on the banks of the Wanganui River.

The Commission adjourned at 5.30 p.m.

WELLINGTON, TUESDAY, 27TH MAY, 1913.

The Commission met at 2.30 p.m., all the members being present.

The minutes of the previous meeting were read and confirmed.

The subcommittee reported on its visit to Wanganui and the sand-dunes on the west coast.

The Commission further considered its report, and adjourned at 5 p.m.

WELLINGTON, FRIDAY, 30TH MAY, 1913.

The Commission met at 9 o'clock, all the members being present.

The minutes of the previous meeting were read and confirmed.

It was resolved, in regard to the request made at Greendale by a deputation of settlers of Oxford, Canterbury, That certain extensions of the present reserves in that district should be made; that the matter was one that could be best dealt with by the Canterbury Land Board.

As regards scenery reserves, it was resolved as follows: Whereas section 6 of the Scenery Preservation Amendment Act, 1910, prohibits the use of firearms in a scenic reserve, and as it may be expedient that firearms should be used to exterminate noxious animals that destroy the vegetation therein, it is desirable that some amendment of the Act should be made by which the Minister in charge of scenic reserves could grant under proper safeguards a permit for the destruction of such noxious animals.

On the motion of Mr. Adams, seconded by Mr. Clarke, it was resolved, That Dr. Cockayne should accompany the Chairman in presenting the report to the Prime Minister for transmission to His Excellency the Governor.

It was resolved, That the Chairman be authorized to sign the minutes of the last meeting.

On the motion of the Chairman, seconded by Mr. Murdoch, a cordial vote of thanks was passed to all State officials and private persons who had so willingly afforded their assistance during the inquiry of the Commission.

On the motion of Mr. Lethbridge, seconded by Mr. Murdoch, a very cordial vote of thanks was passed to the Chairman for his able and zealous conduct of the business of the Commission.

On the motion of Mr. Lethbridge, seconded by Mr. Adams, a very cordial vote of thanks was passed to Dr. Cockayne for so readily placing his literary abilities and technical knowledge at the disposal of the Commission, and for the untiring energy he had devoted to the work.

On the motion of the Chairman, seconded by Mr. Lethbridge, a vote of thanks was passed to the Minister in charge of the buildings for his kindness in allowing the Commission the use of the rooms.

It was resolved, That a cordial vote of thanks be passed to the Secretary, Mr. Phillips Turner, for his zealous and able conduct of his heavy duties.

It was resolved, That a cordial vote of thanks be passed to Mr. W. H. Russell for his ability in the conduct of his duties as official reporter.

The Commission finished its final sitting at 12 noon.

MINUTES OF EVIDENCE.

INVERCARGILL, MONDAY, 3RD MARCH, 1913.

WILLIAM MOSELEY ANDREWS sworn and examined. (No. 1.)

1. *The Chairman.*] What do you wish to state?—I represent, with Mr. Walker, the building trades and Builders' Association of the Southland District, and desire to place before you our views on the matter the Commission is inquiring into. The question of afforestation in this district is going to be a serious one if not grappled with at once, inasmuch as our forests are being rapidly depleted, and as no provision is being made for replanting it follows that timber fit for building purposes will soon be non-existent. We think that the Government should, in the first place, remove the duty on imported timbers, especially Oregon pine, which would, in our opinion, help to preserve the local timbers to a large extent, as they are more suitable for certain work than our own. We also think that the present wholesale slaughter by the mills is uncalled for, and that something should be done by inspection so that more care can be exercised in regard to the cutting thereof. Also, something might be done on these lines: sawmillers, after they have cut out an area, should plant a certain number of trees in place thereof in selected places. Trees could be supplied by the Government at a nominal cost. Arrangements might also be made to form a tree-planting society in various centres, Government to supply trees to this society free of charge. We would further urge the Government to use every endeavour to push on the tree-planting on the lines they are doing in the north, by planting suitable trees which would in, say, from forty-four to fifty years, be fit to use. We have heard of samples of timber from imported trees, grown in New Zealand, that have been fit to use in less than the above time. There are large areas in Southland that are not suitable for farming which could be planted—viz., all the eastern slopes of the Longwoods around Otautau, &c., which, lying to the sun and protected from the westerly gales, would grow trees to perfection. Another area is lying along the hills fronting the Hedgehope River. This country, being well watered and interspersed with many gullies, and of easy access, would make an ideal plantation. In conclusion, we hope that the Commission will use their best endeavours to promote a system of tree-planting throughout the whole of New Zealand.

2. Can you give us an idea of the areas you consider suitable for planting?—Only approximately. I allude to the Hedgehope district. The gullies there are suitable for agriculture, but the growth at present is merely scrub. The abandoned mining area lying to the south and facing north to the Hedgehope River would be suitable.

3. Do you know of any plantations that have reached a stage fit for milling?—No. I have seen *macrocarpa* used for window-sashes, but I cannot speak as to its lasting capabilities.

4. Are there any trees of that kind over forty years old in this district?—Yes, some distance from Invercargill.

5. *Mr. Murdoch.*] What do you mean by "wholesale slaughter by the mills"?—I mentioned the sawmillers, but I should also have included mining operations. As a miner I have seen the trees indiscriminately cut down and left to be burnt in dry weather. They were 5 ft. in diameter. The sawmillers are not doing that now; but still there is room for better methods of selection of the trees for cutting. The smaller trees should be left for timber, whether in mining or sawmilling areas, and then in time they would come into use. I think the methods of inspection of milling-areas should be improved.

6. *Mr. Lethbridge.*] But these people are cutting their own bush?—Yes, but a special safeguarding clause should be inserted in the lease when the area is granted.

7. You think timber-trees ought to be planted in such areas?—Yes.

8. *Dr. Cockayne.*] Have you seen any foreign trees which have been planted in old bush which has been partially cut?—I have seen some imported trees so planted. The *macrocarpa* will grow splendidly in any bush. On the Orepuki Diggings areas of scrub were cut, the big trees left, and the land was sown in grass.

9. Would such an area if cleared entirely of native timber grow grass?—Yes.

10. *Mr. Clarke.*] Your idea is that planting should take place in this district in order to ensure in the future a permanent supply of timber?—Yes.

11. What about the financial point of view? Has there not been a considerable increase in the cost of timber as the result of sawmilling being removed to a farther distance afield?—There has been a considerable rise, as much as three times. It is not accounted for by the increase in the cost of labour, as sawmillers fourteen years ago were getting almost the same wages as now.

12. *Mr. Adams.*] Do you know the present state of the sashes you referred to made from *macrocarpa*?—No. They were made twelve years ago.

13. *The Chairman.*] How much do you pay on the railway per 100 ft. from Bluff to Invercargill?—Rate and a half on imported timber. The price of Oregon has risen 7s. 6d. a hundred feet in Southland during the last three months.

JOHN WALKER sworn and examined. (No. 2.)

1. *The Chairman.*] Do you also wish to make a statement?—I am a builder, but have had only a limited experience in sawmilling. We only got twelve years ago half what is being got for timber now.

2. *Mr. Clarke.*] What is the reason for the difference? Has there been a large increase of cost at the stump?—Millers have to go farther back for it now, and into rougher country. Wages are not much different, but the millers are making better profits now.

3. You agree with the builders that further plantations should be established within a reasonable distance of the places where the timber is needed?—Yes. There are a lot of abandoned mining-areas near Otautau that should be planted.

4. What height do the hills run there?—From 300 ft. to 400 ft.

5. *Mr. Lethbridge.*] Whom do the abandoned areas belong to?—I think to the Government.

6. *Mr. Murdoch.*] Have you made recent observations of the cutting of the timber, the getting it out of the bush, and the alleged slaughtering that is said to be going on?—No.

GORDON HURRELL MORELAND MCCLURE sworn and examined. (No. 3.)

1. *The Chairman.*] You are Commissioner of Crown Lands and Chief Surveyor for the Southland District?—Yes. I have been here twelve months last December.

2. You have the administration of the timber industry under the Land Regulations?—Yes.

3. Do you find those regulations work generally satisfactorily?—I suppose they work satisfactorily, but I do not quite understand your question. Do you want my opinion as to whether the Timber Regulations should be improved or not?

4. Yes?—I have not gone into that question. When I came here the usual thing was to estimate the timber, and I found that the quantity of timber some mills were supposed to be cutting was farcical—one panned out at 355 ft. a day; so I recommended the Head Office to alter the system of reckoning to the actual output, and every miller, barring two or three, is against the change, which seems a strong argument that they were not paying for the timber they were previously cutting. The improved system applies to the new areas taken up.

5. How was the timber estimated previously?—By the Ranger and the surveyor who surveyed the area. The way they estimated the value of timber was absurd—much too approximate, in my opinion.

6. What is the process in Southland if a miller wants 200 or 400 acres of rough bush?—He can only get 200 acres.

7. Does the Department here insist on a survey?—In every case, practically. Those surveys are done by private surveyors, instructed by the Department.

8. How are the figures of the sawmiller checked as to his output?—He has to put in a sworn statement; but we have not commenced the new system yet.

9. Have you ever had complaints from the sawmillers that the Ranger had overestimated the timber?—No; their stock argument is that they did not appoint the valuers. They also wished to know why they had to pay for second-class timber. I replied that everything off the saw had to be paid for.

10. Under the old system if a Ranger made a mistake and estimated a bush at 3,000 ft. to the acre, and it turned out to be 20,000 ft., the miller would get the benefit?—Yes.

11. But if the trees were counted, branded, and measured, there would be no danger of the Crown losing revenue in that way?—No.

12. What royalty do the millers pay here on red-pine?—Sixpence per 100 ft.

13. It has been represented to the Minister that certain scenic and other reserves have become breeding-grounds for noxious weeds and rabbits: have you such complaints in this district?—No. One settler complained about a small reserve I have made since I came here, near Orepuki.

14. On what ground?—He wanted the land for farming, I think. Rabbits are all through Southland, and unless you net the country you cannot keep them out.

15. Have you heard complaints about opossums doing damage to native trees?—No, the office file will give what information there is. There was a consensus of opinion that for these animals there should be an open season.

16. Can you suggest any suitable areas of Crown lands that could be planted?—Not offhand. Up near Kingston there is a lot of inferior country that is available for the purpose, but there is nothing to the east.

17. *Mr. Adams.*] What do you think of the eastern slopes of the Longwood Range for the purpose?—That is nearly all sold. As soon as you mill the virgin bush the weeds follow, and it is impossible to cope with them. The only thing to do is to cut such country up for settlement. As soon as you mill the bush here it is valueless as a bush.

18. And the soil where you refer to is decent?—Fairly good.

19. *Mr. Clarke.*] It has been suggested that areas near Otautau and Orepuki and Hedgehope, abandoned mining claims, would be suitable for tree-planting: is that your opinion?—No such areas are available at Otautau and Orepuki. The Hedgehope country is poor, cold, indifferent country—the worst in Southland. Land there has been offered to the Land Purchase Board for £2 10s. per acre. The ground wants lime. Country which has been so treated has been resold at £10 an acre.

20. *The Chairman.*] Do the settlers here experience any difficulty respecting the second growth on their clearings?—Most of the clearings have been made along the coast, and there is probably no better land in Southland than round the coast. It is now in grass paddocks.

21. With regard to the National Park, I suppose that is pretty wild country?—Yes.

22. Have you been on it?—Years ago. Some portions of it may be good land.

23. Have you been on Stewart Island?—Not for a long time. It is all forest. I do not think that Stewart Island is suitable for settlement, and there is no demand there for settlement land. Mr. Arthur Traill, on behalf of the settlers, has requested me to go to Stewart Island and inspect the scenic reserves with a view to the uplifting of some of the reservations.

24. I have here a copy of a schedule of quantities of timber available sent from here to the Head Office. Have those figures been prepared by Mr. Collins, the Ranger?—He probably checked them. They would be compiled from the various reports and office records.

25. When these schedules were sent to Wellington was there any qualifying statement attached?—I do not know. I would like to see my covering letter. The figures were really approximate.

26. Have you had any practical experience in valuing timber-areas?—No.

27. *Dr. Cockayne.*] As far as Southland is concerned there is really no information of any value as to when the timber will all be felled?—We know only about certain areas; but that return is only an approximation.

28. *Mr. Clarke.*] Is it not just as likely that the quantity is overestimated as underestimated?—Yes. I think that return is taken from one of the forestry returns, from which the quantity since milled has been deducted.

29. *Mr. Adams.*] Is the variety of trees here the same as on the West Coast?—I think so, but there are much better trees in Westland than here. The people here cut everything, because of the manufacturing that is done.

30. *Mr. Clarke.*] Are there any places along our route in Southland it would be desirable to see with a view to afforestation?—No, unless you go into the Longwoods. The really good land has all been let. I purpose reserving a wooded hill at the back of Otautau for scenic-reserve and water purposes.

31. *Dr. Cockayne.*] What has been done with the top of the Longwood Range?—It has been reserved for climatic purposes.

32. *Mr. Clarke.*] Where is the nearest point you could recommend an area for planting timber for building purposes in this district?—There would be no difficulty in getting land to plant if you had the suitable timber-trees. No land district is so much under agriculture as Southland, but it has too much rain, and therefore we do not want any more bush. There is plenty of land here that is available that is better than the Hanmer land.

33. *Mr. Lethbridge.*] Have you any scenic reserves that are not required that could be drawn upon for settlement?—I do not think so. Until land becomes too valuable to hold as scenic reserves it should remain in its present category.

JAMES COLLINS sworn and examined. (No. 4.)

1. *The Chairman.*] You are the Crown Lands Ranger and Timber Expert, Southland, for the Lands Department?—Yes.

2. You have had considerable experience in estimating the value of Crown and other bush lands?—Yes.

3. Is it confined to this district?—I have been in other districts in the North Island and Otago. I have been in this district since I was twenty, but have been eight years in the Government service. Prior to eight years ago I was sawmilling.

4. Were these tables regarding timber-areas in Southland which have been sent from the local office to Wellington compiled under your supervision?—No, but I think I was consulted over some of them.

5. Who would have compiled them?—I think they have been compiled chiefly from my reports.

6. Probably they are all compiled from your reports?—Most likely. I have not seen these before, though. The chief part consists of only rough estimates, because they relate to places where nobody has been. All the country west of the Waiau is practically unsurveyed.

7. Are the estimates within 50 per cent. of being right?—I would not say that. They are all underestimated.

8. What has been the system in leasing timber-areas to the millers?—A sawmiller took up an area of about 200 acres, which would be surveyed; and there would be other reserves—say, about three others of 200 acres each, or 800 in all.

9. How did he pay for it?—On an estimate given by the Crown on the area as surveyed.

10. Did you prepare the estimates of the amount of timber in these blocks?—No; they were chiefly calculated by the surveyor who surveyed the land. I have also done some.

11. What was your method?—To get the height of the tree, the diameter, and the average; and then the method of calculation as to the quantity of sawn timber that would come out of that tree was to square two-thirds of the diameter, and multiply that by the length. The result would be practically the same as that arrived at by the method adopted by the surveyors here.

12. What was the smallest tree you would consider a milling-tree when measuring the bush?—We measure generally any tree which will not be less than a foot in diameter at the butt.

13. How long has that been in vogue?—Since 1886.

14. What would be considered a good average milling-bush here?—10,000 ft. per acre at the present time.

14A. What is the highest figure you have got off an acre in this district?—Close on to 40,000 ft., in the case of the Seaward Bush in the early days.

15. Taking Forest Hill on this list here: it gives an area of 4,000 acres, and 12,000,000 superficial feet of rimu, 4,000,000 of kahikatea, 1,000,000 of matai, 1,600,000 of miro, 400,000 of totara, making 19,000,000 in all. Has that area been accurately measured?—No, it is just approximate.

16. How did you arrive at the quantities of timber in each?—It is just a rough estimate only. There would not be double the quantity in it. It is only a guess from what I have seen of the bush alongside.

17. Have you been in the National Park?—Very little, and not far into it.

18. So that the classification there again must be purely a guess?—Yes, and a very rough guess. I am sure there will be more timber there than we have estimated.

19. That only works out to 200 ft. an acre?—Yes.

20. Do you know the Mokoreta Block?—Yes.

21. Is that all bush—15,000 acres?—No; there is a good deal of scrub. About 2,000 acres would be milling-bush.

22. What would it run to the acre?—About 3,000 ft.

23. Then the figures given in this schedule, 392,000 ft., are quite wrong?—That has been copied from some old return made out before I joined the Department, and never checked since.

24. Have you been to Stewart Island?—Yes; it is very poor milling country. There are three mills there, milling from 3,000 ft. to 4,000 ft. to the acre, chiefly red-pine and miro; very little kahikatea, and no matai.

25. Is there much birch?—There is very little, if any.

26. What is the number of mills in operation in Southland?—About sixty.

27. What is the average number of hands employed?—About eighteen.

28. Is there much export of timber out of New Zealand from here now?—Not much.

29. Do you consider the regulations under the Land Act a satisfactory mode of dealing with the timber?—Yes.

30. When the trees are measured and counted are they branded?—No, because we do not measure everything.

31. What proportion of trees in a 200-acre block would you measure?—Probably 7 or 8 acres. We might take half a chain all the way round where we would measure the timber accurately, and then multiply the whole area by it.

32. Would a bush of that sort be fairly even throughout the whole block?—In nineteen cases out of twenty that would give a very fair average.

33. In the method you use for getting the average per acre do you make any allowance for waste?—No; that method accounts for the whole quantity with the exception of totara. If it is a very bad sample of totara we sometimes deduct 10 or 15 per cent. The same with birch, which is very faulty.

34. *Mr. Murdoch.*] Do you allow for the bark?—No, the only allowance we make is the one-third of the diameter, which makes up for all waste.

35. *The Chairman.*] At what height from the ground would you measure the butt diameter?—2 ft. 6 in. The average of that tree would be 9 in. or 10 in. If it measured 10 in. it would be picked for milling and the tree would be measured up.

36. Is there any check when they do cut it?—The butt is there, and you can check it.

37. Do the sawmillers hold the reserves for excessive periods, or do they work them continuously?—They have held them much longer than they should in some instances. Under the old Act of 1885 and the State Forests Act there was no limit, and consequently the New Zealand Pine Company and several others who took up bush at that time hold it still, practically.

38. There is no provision for making them cut it?—It is all provided for now, and the millers here have come under this new regulation. They must have it cut out in twenty-one years now.

39. *Dr. Cockayne.*] I see in this list the term "tawai" is used: what is meant?—Birch.

40. Do you include one species of tree, or more, in that term?—We only include the one species of birch. There are four or five.

41. Do you include all the four or five as "birch"?—Yes, but only red-birch and brown-birch are milled.

42. Is kamahi milled in Southland?—No.

43. It is not included in this schedule, and yet it forms a large proportion of certain forests?—Quite right.

44. Both the *Fagus Menziesii* and the *Fagus fusca* are fit to be valued for milling purposes?—Yes.

45. What is miro sold for?—It is classified as red-pine and sold as such.

46. Do you know pokaka?—Yes.

46A. Is that milled?—I have seen it cut for a tramway.

47. What do they sell it as?—I have never known it sold as a timber.

48. *Mr. Murdoch.*] You think the figures given in this return are not very reliable as to the quantity of timber available in Southland?—I think it is all underestimated.

49. *Mr. Clarke.*] You have probably taken care that it should be underestimated?—Yes.

50. Why?—When a man is asked for an estimate, and it is a rough one, it is much safer to underestimate than to overestimate.

51. Practically, Stewart Island cannot be taken into account as a milling-bush?—There are mills working there now, and will be for some time.

52. *Dr. Cockayne.*] Could a mill be profitably established in the neighbourhood of Port William?—Yes.

53. And in the bush at the head of the Freshwater River going to Mason's Bay?—Not at present, because it is too far away.

54. Do you know the silver-pine?—Yes, in the wood, but not in the tree.

55. Do you know the pine called "yellow-pine" in Westland: in Stewart Island I think they call it "bog-pine"?—Yes.

56. It is mostly very small, although it is an extremely durable wood?—Yes.

57. It is not big enough to cut for railway-sleepers?—No.

58. *The Chairman.*] Where the kahikatea has been cut and milled, is the land then found to be good agricultural land?—Yes, some of the best in the district when drained. It is not swamp land, but just wet land, and the soil is good when drained.

59. If land containing kahikatea bush were locked up indefinitely it would tend to bar the development of the dairying industry?—I should think so.

60. *Mr. Murdoch.*] Do you know of any other wood in this locality which would be suitable for butter-boxes when artificially treated?—No, but I think this brown-birch would be worth trying.

61. *Dr. Cockayne.*] Why should you not not try the *Fagus fusca* as well?—We have not any within easy distance. The nearest is at Five Rivers and Burwood.

DUNEDIN, TUESDAY, 11TH MARCH, 1913.

ALEXANDER BATHGATE sworn and examined. (No. 5.)

1. *The Chairman.*] We were very pleased to receive your letter, Mr. Bathgate, on this question, and shall be glad to hear any further remarks you wish to offer?—I wrote that letter in order to interest you on the question of afforestation in Central Otago. A little has been done at Ranfurly and Naseby, but operations should be prosecuted more vigorously in that district, as the country in the Molyneux Valley, from Alexandra up to Lake Hawea, is eminently suitable for fruitgrowing, and afforestation will still further improve it. Supplemented by irrigation, its future will be beyond question. A large part of that area could be cultivated by the dry-culture methods adopted in some of the States of America, and the Dunedin Expansion League has urged the appointment of an expert on this matter. Whenever the lease of one of the grazing-runs falls in it should be divided into smaller areas and dealt with on the methods I suggest, afforestation reserves being made in connection therewith. There is no other land in the district available for afforestation; and in the future there will be a great demand in the district for timber for fruit-boxes. The first planting in this district was on low land at Naseby, but I would like to see, in the Molyneux Valley especially, a reserve half-way up the mountain-sides for planting purposes. I think the larch would grow to a very considerable elevation, and pines. Severe frosts occur in that district. As to water-conservation, in that dry country it is necessary to preserve the water-supply for irrigation requirements, and under afforestation operations the flow of the river would be augmented. The Manuherikia River never runs dry, but many of the streams do in summer. It is not necessary that timber for fruit-cases should be of first-class quality. *Pinus radiata* might be planted, as it is quick growing, and would make excellent timber for the purpose. The poplar also does well there, and I suggest that this tree should be planted where the country has been subjected to dredging operations. Thirty years ago some land forming part of the High School endowments at South Taieri were placed on the market, and the plan showed afforestation reserves, but nothing has been done there in that direction. Afforestation would prove beneficial to the valley by providing breakwinds.

2. What is the area?—32 acres, 55 acres, 49 acres, and 22 acres. But they are only 5 chains in width, and it is a pity they were not much wider.

3. Would not small areas like that be better dealt with by the local bodies?—Probably it would be better. As to afforestation for national purposes, undoubtedly the country near Hawera in the North Island should be planted, and a broad belt along the sea-coast would prove a great shelter, and enhance the value of the land. Jutland is a case in point where such plantations have been made with much advantage. The local bodies hitherto have not been very much encouraged to plant trees; there is difficulty in getting the trees from the Government at present. Afforestation operations should not be dependent on a yearly vote of Parliament, but should be based on a system that would not be likely to be curtailed should a financial stringency arise, or change of Government take place. When the Department has trees available for planting, local bodies and settlers might be notified of that fact by advertisement—the price should be a low one—and I feel sure the opportunity would be largely availed of. I am strongly of opinion that the Government should appoint a forestry expert, and in saying that I am not reflecting on the men in charge of the nurseries, who are capable men. I know two of them, Mr. Goudie and Mr. Roberts, but I do not think they claim to be all-round forestry experts. The Indian Government appoint men at £1,000 a year as experts in forestry, and others skilled in chemistry, botany, and the nature of soils.

4. Have you any knowledge as to the destruction said to be done to the native forests and plantations by the imported deer?—No, excepting that there is no doubt that when they become numerous the deer do a great deal of damage to the forests. The same remark applies to the rabbits, that are doing much damage to the undergrowth, practically eating it out, especially at Tapanui.

5. In afforesting Central Otago would it not be necessary to erect rabbit-proof fences to protect the plantations?—I am afraid it would be until the trees grew up. After a time the fencing could be moved to another block.

6. *Mr. Adams.*] Do you think an expert from Home would be able to introduce any fresh methods of any value to us here?—Quite possibly he might, as many trees of value have never been tried here. There are trees in Uganda growing on hills that might be suitable to this country; they are comparatively new to science. An expert in soil chemistry would probably be able to tell us at once that it would be useless to plant certain trees in certain soils.

7. *Dr. Cockayne.*] What time would an expert who was regulating the whole business of forestry have to analyse soils?—He would be the controlling head, but there would be chemists attached, say, to the Lands Department, who would report to the head of the Forestry Division, who would then appraise the value of the analyses and apply it to practical use. I know a little of the training these men undergo at Oxford, where they have specialists in all these departments.

8. You mean that a trained scientific man should be at the head of affairs, and not a gardener?—Quite so. I do not suggest bringing a man from outside if we could get one in the Dominion with the necessary qualifications.

9. Do you think it a fair thing, after large areas of land have been planted for future forests, and some of the present forest country has been set aside as national parks and climatic reserves, that it should be allowed to be filled with deer for the benefit of sport, when there are so many other areas where the deer would do no harm?—I think it is a mistake to allow the deer to roam at will all over the country.

10. *Mr. Adams.*] Would you be in favour of remitting rates and taxes in the case of any private person planting not less than 5 acres of land?—I would be strongly in favour of doing so. At present, if a man plants his land he is afraid the value will be raised and he will have to pay more taxation.

11. You wish the State to conduct the operations and private individuals to assist?—That is my view.

12. *Mr. Clarke.*] Would it not be necessary that the whole matter should be under the control of the Government, in order to ensure a national supply, seeing that the time element is so important?—Perhaps so.

13. Would the proposal as to private individuals assisting lead to anything like a national supply that could be depended on?—No.

14. *Mr. Murdoch.*] Do you think that the Government in giving trees to settlers ought to exercise some supervision over the planting, and afterwards?—I do not propose that the trees should be given, but the cost should be kept as low as possible—to near cost price. A settler would never stand the Government stepping in, after he had bought the trees, and telling him he must not touch them.

15. Then it would be no use his planting them?—If he paid a low price for the trees I do not think the Government has any right to say what he should do with them in the future.

WILLIAM CAMPBELL sworn and examined. (No. 6.)

1. *The Chairman.*] Do you wish to make a statement to the Commission?—Yes. I am the assistant forester at the Corporation nursery, Dunedin, and I propose to deal with the question of the benefits of forestry from an agricultural point of view. There are tracts of land that should be planted to assist moisture, keeping in view the fact that New Zealand is largely composed of hills and valleys. I have observed that various districts in Otago are falling back in respect to milk-production through the land being laid bare. This country is destined to be the Denmark of the Southern Hemisphere for dairy produce; but various districts I have visited where dairying is carried on give indications that a heavy loss annually occurs through the want of shelter. The Peninsula, Dunedin; a large part of the coast land between Port Chalmers and Oamaru; large tracts of land on both sides of the railway between Gore and Morton Mains, and away to the western district, are cases in point. In these places shelter is very necessary, but we have not got it. Thus we have exposure, which affects the cow by inducing consumption, red-water, mammitis; loss of butter-fat, through want of food and water, follows. All this arises through the want of shelter.

2. Are the lands you refer to Crown or private lands?—Private.

3. Have you any suggestion to make as to how they should be afforested?—The high lands should be planted by private individuals.

4. How would you ensure that they should plant them?—By legislation.

4A. Do you think the State should assist the settler in any way in the matter?—Yes, by finding the trees.

5. What about the fencing?—I would protect the plantations with wire netting.

6. Who should pay for it?—I would ask the Government to assist, assuming an expert reported that planting in the locality was necessary.

7. *Dr. Cockayne.*] Do you consider that changes of climate have come about since the destruction of the forests?—There has been a huge loss of moisture in various parts.

8. Have you any accurate records bearing on the matter, or is your opinion based largely on a general idea derived from your knowledge of this district?—My opinion is derived from information gained through having gone through the districts mentioned.

9. Then it is a general idea rather than a scientific fact?—Yes, but I think it is also scientifically correct.

10. Have you kept exact records of rainfalls?—No.

11. Or the effect of rainfall on the forests?—I have not.

12. *Mr. Adams.*] What do you think of the suggestion to exempt the private owner from rates and taxes as an inducement to him to plant?—I quite agree with that.

13. Would you not prefer that proposal to the idea of compelling him to plant?—Where expert knowledge is brought to bear it should predominate, and if necessary pressure should be exerted to effect these improvements. My evidence, however, bears only on the value of shelter for dairy stock.

Gorman William McIntosh and Alexander Cowie sworn and examined. (No. 7.)

1. *The Chairman.*] I understand that you gentlemen represent the Otago Acclimatization Society?—[*Mr. McIntosh*] Yes, I am the president, and Mr. Cowie the secretary.

2. It has been represented to us, Mr. McIntosh, that the unrestricted roaming of the deer through the national forests may prove detrimental to the trees, and we would like to gather the opinion of the society as to the value of the deer to the country, &c. Do you consider the untrammelled wandering of the deer all over the country beneficial to the State?—No. There are parts where they do no damage and give very good sport, and thereby attract visitors to the country. Money is spent with benefit to the district concerned, but to allow the deer to roam without restriction throughout the country would be very detrimental.

3. Do you consider that certain well-defined areas for deer-parks would meet the requirements of sportsmen?—Yes.

4. In what manner would you restrict the deer to those areas?—The only way is to shoot them off and keep the numbers down.

5. It is stated that some herds are spreading throughout the Alps, and unless some steps are taken they might soon occupy the whole of that territory. They are also invading settlements and the State nursery at Tapanui?—The latter are isolated instances. In New Zealand there is a tremendous lot of country that is fit for nothing else but deer. Where the animals now are is very rough, broken country, with no sheep on it in many cases. The red deer are high up on the snow-line, and that country is fit for nothing else. The fallow deer are at Tapanui, in the Blue Mountains, and in that district we are told they are a nuisance to settlers. The matter was referred to our society, and we are in communication with the Minister of Internal Affairs, and we have agreed that those settlers whose lands are affected should have the right, with their families, to kill the deer all the year round in order to keep them down. But some of those settlers have got at a very nominal rate country which would be better utilized as deer-parks. At other places on the mountains deer have invaded the settlements, but the settlers do not mind, as they can get game nearly all the time, and they take advantage of it. Something should be done to keep the deer out of the Government nursery, as they damage the young plants.

6. *Mr. Murdoch.*] The red deer are doing the damage at Dusky Hill plantation. I understand you are referring to fallow deer?—The fallow deer are reported to be more mischievous. We have suggested that settlers should use the bird-scarifiers which have proved so successful in other places to keep the animals out. The cartridges can be set to explode at any interval required. They have been very effective at Roxburgh amongst the fruit-trees. The settlers in the deer districts do not think much of them, but we propose to send the Rangers up with two of the machines to let the settlers see the effect.

7. *The Chairman.*] It is stated that the deer eat the young growth out, and perhaps in course of time may exterminate the climatic reserves. Have you any opinion to offer in that connection?—I suppose the cattle that run there would do the same. I have been told that the deer on the Blue Mountains have done good in keeping down the Canadian thistle.

8. *Mr. Lethbridge.*] If you give the settler the right to shoot at any time he will welcome the deer, and our forests might be ruined?—I have not heard that they were doing damage in the Tapanui Nursery, but we have been informed that they were working down towards there. They will have to be shot out of that.

9. *Dr. Cockayne.*] Deer have quite recently been placed in the vast forest at the headwaters of the Waimakariri River in the hope that in time they will help to form one continuous herd throughout the northern portion of the Southern Alps. Do you think it reasonable that any risk of damage should be run in the case of that forest, which is of very great importance to the Dominion, for the sake of sport?—I do not think those deer would really be a serious menace to our national forests, and it would take them a long time to spread through that range. In the Hawea district there is a very large herd that wants shooting out. They never leave that part of the country, with the result that the district has become overstocked, and the animals have deteriorated. We have arranged to shoot them out by contract. We have shot out five hundred head of deer this season.

10. Tourists go to Mount Cook to see the beautiful mountain-flowers, and if there were large herds of chamois there those plants would be wiped out. Which do you think it is the best for the country to keep?—It is a matter of taste. The botanist would prefer the ranunculus, and the sportsman the chamois. There is very little danger of the chamois becoming so numerous as to do much harm. A short time ago only one was seen on Mount Cook, and that was supposed to be the last. No others have been seen.

Mr. Cowie: At the head of Lake Wanaka there are large patches of the *Ranunculus Lyallii.*

11. *Dr. Cockayne.*] Is there not a danger of these plants being destroyed, Mr. Cowie, by these animals in those places where the Government caters for tourists, and where consequently they should be preserved?—The mountains where there are large patches are often the places where the deer are most plentiful: they do not touch them. It is above sheep level.

12. *Mr. Clarke.*] Were the five hundred head of deer shot for the purpose of preventing damage to the country, or to prevent the deterioration of the herd, Mr. McIntosh?—To maintain the standard of the herd. We have been told by visiting sportsmen that we have here the finest type of red deer in the world, and the finest herd, and so we wish to keep up our reputation by thinning the animals out.

13. Would that be considered sufficient by the settler who may be suffering damage from the incursions of the deer?—In that part of the country they do not do any damage to the settlers. They are in the wilds of the country, where there are no sheep even. At Morven Hills there are no complaints at all from the settlers.

14. *Mr. Murdoch.*] Do you consider those areas where there are no sheep even suitable for tree-planting?—I do not think so, on account of the snow and frosts.

15. In those districts where the deer are getting too numerous, and are damaging the farms and the State plantations, you consider it advisable that they should be shot off?—I do.

16. Would not that solution of the matter be enough for the settler?—They do not think so, but some even want to go in for poisoning.

17. *The Chairman.*] If they got permission to shoot them at any time when they trespassed on the farms might not they go into the mountains and shoot them?—We know they are shooting them all the time. We are anxious to acclimatize animals, birds, plants, or trees, and it is not to our interest to try and force anything detrimental on a settler, or that he is opposed to. We are anxious to meet him.

GABRIEL HODGES, President, and JAMES KNOX, Secretary, Otago Builders' Association, sworn and examined. (Nos. 8 and 9.)

1. *The Chairman.*] I understand that you wish to make a statement to the Commission, Mr. Knox?—Yes. The executive of the Dunedin Builders' Association are convinced that afforestation is urgently required, and of vital importance to the prosperity of the Dominion. It is a well-known fact that the forests of both North and Middle Islands are being depleted at a rapid rate, and comparatively little afforestation is taking place. We are also of opinion that it is a matter of the utmost importance that the reafforestation of the lands should be carried on in a more vigorous manner than has obtained in the past; also that special consideration should be given to timbers suitable for building and other constructive purposes. Further, that large areas of land suitable for afforestation can be planted in this Island without in any way encroaching on land suitable for agricultural purposes.

2. Has your society gone into the question of what timbers they consider should be planted?—The pines we think would do—Corsican and yellow.

3. Has the *Pinus insignis* been used for building purposes in Dunedin?—It has been used for scantlings and weatherboards; also for joinery-work.

4. *Mr. Lethbridge.*] From trees grown in New Zealand?—From the imported timber.

5. *The Chairman.*] I refer to the locally grown timber?—I do not know of any *insignis* which has been cut down here and turned into timber.

6. Has the association considered the length of time the timbers they advocate should be planted would take to grow?—It would be a matter of from thirty to forty years.

7. What timber would be available after that time for sawmilling?—I have not gone into that question, but I suppose the Corsican pine would be ready in that time.

8. In the event of thinning-out taking place, what could the smaller trunks be used for?—For farm use, such as fencing; but not for posts.

9. Is any birch or beech used in the local market here?—No; we do not care for it. It has been tried; you can always buy it at 2s. less than any other timber, which indicates there is something wrong about it for building purposes. It warps and twists badly.

10. There are several kinds of these birches or beeches: which ones have you tried?—We call it here the red-birch. It is used for making chairs and furniture.

11. Does it warp if it is properly seasoned?—It requires a lot of watching.

12. Does it make good furniture if properly seasoned?—Yes, when properly seasoned it is a good timber for furniture. We are using it extensively now for that purpose, but outside that I do not think any one in Dunedin is using it. It is obtained from Southland.

13. *Dr. Cockayne.*] Have you had any from any other district?—Not that I know of.

14. Would it surprise you to know the red-birch does not grow in Southland?—It would surprise me.

15. *Mr. Clarke.*] Would you be less surprised if you were informed that the various kinds of birch are called all sorts of names in different districts?—No.

16. Assuming it is called "red-birch" here, is it fair to assume it would be called "red-birch" where you got it from?—Yes.

17. Do you consider you are responsible for the name?—No.

18. You are only concerned as builders with the value of the timber for your purpose?—Yes.

19. Would you consider it advisable to re-forest with that tree in preference to introducing foreign trees of proved value?—I would introduce the foreign trees, because the birches are useless.

20. Are the prices of timber still going up?—Yes.

21. Are there any lands near here, or within reasonable distance of this market, that could be planted?—The land at the back of the Flagstaff might be planted, and about Seacliff. It is handy to the railway and the city.

22. If timber is planted by the Government for commercial purposes you would not expect them to spend £500 in producing £400 worth of timber?—No.

23. Would not the proposition from a commercial point of view depend largely on the price you get the land at?—The Lands Department would be the best people to decide where the land should be selected.

24. *Dr. Cockayne.*] Do you think it right that a sawmiller should sell you yellow-birch, a comparatively worthless timber, under the name of "red-birch," which is a fairly good timber? —The difference would not be understood by the man who was buying the timber.

25. *Mr. Adams.*] Do you know the difference between the different birches?—We have only the one we call the red-birch on the market here.

26. *Dr. Cockayne.*] When you get a consignment of totally different timber under the name of "red-birch" from Nelson, or the North Island, what do you call it?—We would call it "beech" here.

27. *Mr. Murdoch.*] Supposing you get it from the mills seasoned, will it twist or warp again? —It must be watched and turned.

ERNEST HERBERT WILMOT sworn and examined. (No. 10.)

1. *The Chairman.*] Have you been long acquainted with this district, Mr. Wilmot?—I am the Commissioner of Crown Lands here, and have held that position for about four years, but I have been generally acquainted with Otago for close on forty years.

2. What areas in this district do you consider suitable for afforestation purposes—land that is fairly cheap?—The Superintendent of the nursery at Tapanui has spoken to me several times about this matter, and I have consulted the Ranger also; but we have found it very difficult to find any areas in Otago that are suitable, and that we could recommend.

3. I understand there are large areas of Crown land in Otago Central?—Yes, large areas held under pastoral lease.

4. Are there resumption clauses in the leases, or would you require to wait until the end of the lease before the lands would be available?—Most of those runs are held under Class A, and not resumable in the ordinary way; but, of course, you can resume under other clauses of the Act.

5. I suppose the leases expire at different times?—Yes.

6. Are there any expiring shortly?—We looked through the leases expiring up to 1918 not long ago, and we would not select any lands from those that seemed very suitable. If you go in for cheap land you will often find that only parts of it are suitable for tree-planting, which tells very badly against the value of the plantations.

7. Do you consider that Otago is well supplied with scenic and climatic reserves?—I think so, as regards purely scenic reserves.

8. As regards scenic reserves, it has been stated that settlers complain that in some districts these reserves are becoming breeding-grounds for noxious weeds and animals, and in other cases the land they occupied was suitable for agriculture and thus they were blocking settlement?—I do not think that applies much to Otago.

9. Have any such complaints reached you?—I do not think it applies to this district.

10. *Mr. Adams.*] Are any of the runs falling in before 1918?—They come in every year. A fairly large run, the Galloway, comes in in 1916.

11. *The Chairman.*] I have just received a telegram from Mr. Statham, M.P., suggesting that the bush in the Waipori Reserve should be preserved. Do you know anything about that matter?—I think there is a large reserve there already.

12. The timber question does not bulk very largely in your district, I think?—All there is is down by the Catlin's and at the Rankleburn, and also on the west coast at Martin's Bay, which is not exploited yet.

13. *Dr. Cockayne.*] Does the timber at Wanaka come into your district?—Just a little at Makarora Valley, which is partly in our district, the other part being in Canterbury.

14. *The Chairman.*] Does the Ranger value the timber when a miller applies for an area?—Up to the present most of the timber has been paid for as cut, on the returns from the mill.

15. How are these returns verified?—The books are open for the Ranger's inspection at any time, and at Catlin's most of it comes out by rail.

16. Does the miller have to make any statutory declaration as to the amount of timber he cuts?—We have never required it of him that I know of.

17. Is any of the timber bought on a royalty basis as it stands?—I started that system as soon as I came here. It is a most satisfactory system.

18. How is that timber estimated?—It is valued by the surveyor who makes the survey, excepting in the case of small patches, when the Ranger will value it.

19. Is the surveyor an officer of the Department, or a private surveyor?—A private one employed by the miller, and paid by him.

20. Is there not a danger in that case of the surveyor being biased in favour of the miller who employs and pays him?—I do not think so. We would not allow a man to act who we did not consider was fairly competent and a straight man. In Southland, where I had considerable experience in both Departments, the millers had great confidence in the surveyors employed there. I have not had much experience in Otago of the matter, not more than two areas having been surveyed since I came here.

21. *Mr. Lethbridge.*] You would not accept his statement if you had no confidence in the surveyor?—No. If the miller wished to appoint a man I had no confidence in, knowing he knew nothing about the value of timber, I would suggest he should get another man.

22. *The Chairman.*] Do you not think it would be preferable to have the timber estimated by an officer of the Department?—Where there is a large quantity of timber in a district like Southland, or your own district, I think so.

23. Is not even a competent man when employed by a private person likely to have an unconscious bias?—He will not overestimate.

24. In regard to the quantities of timber shown in the 1909 return, have you much confidence in those figures?—Necessarily they are only approximate.

25. Have you had any actual experience in measuring and estimating timber?—No, not while I was District Surveyor.

26. *Mr. Adams.*] Do you think the estimates are under or over the mark?—I should say they were underestimated. If we estimated 5,000 ft. in a bush we would write it down to 4,000 ft.

27. *Dr. Cockayne.*] We had an estimate of so-many million feet of timber in connection with a certain kind of tree which it was stated grew at Stewart Island but which does not exist there at all. How would you account for that mistake?—It might be considered to be there, and so it would be entered accordingly.

28. *The Chairman.*] Then these figures are useless because they are only guesswork?—They are not too reliable.

EDWARD O'NEILL sworn and examined. (No. 11.)

1. *The Chairman.*] You are the Crown Lands Ranger for Otago?—Yes. I have been sixteen years in the Government service. Formerly I was a farmer. I have had no experience in saw-milling.

2. What is the method followed when a miller wishes to obtain an area for milling?—He makes application in the usual way, and is instructed to mark off his area in such a way that it can be easily picked out. In the last case the Commissioner insisted on a proper survey being made by the applicant, and the survey was made by a surveyor and not by an officer of the Department.

3. Is that the only case in which a proper survey has been made?—Yes. Most of our bush land has already been surveyed for settlement purposes, and the boundaries are accepted.

4. In this case who makes the estimate of the timber on the land?—I have done so so far.

5. What is your method?—By taking a line through the section guided by prismatic compass, half a chain each side of my track. I estimate each tree within that given area. Perhaps 5 per cent. of the area is estimated, and the rest is averaged on that basis.

6. Then the figures in the 1909 return as to the quantities of timber in the Otago Land District have not been arrived at in the way you state, by measuring off?—Not all through. A lot of that country has not been surveyed.

7. So that any estimate of timber in that place must be only approximate?—Yes.

8. What method do you adopt to get the superficial contents of a tree?—Get the circumference; deduct one-quarter to make a square log; then make your calculation, and take off 33 per cent. In my opinion there is not too much taken off.

9. What is that 33 per cent. supposed to cover?—Only bark and saw-cuts.

10. How do you arrive at the height of a tree?—I take a 10 ft. stick, and try to get my eye into it; but we never measure the trees by getting up them.

11. Do you ever use the Abney level?—No.

12. What is the greatest amount of red-pine which has come off an acre within your knowledge?—The highest for mixed timber was 18,000 ft.

13. How many sawmills are in operation here?—Eleven, employing an average of ten hands each.

14. Can you suggest any improvements regarding the Timber Regulations under the Land Act?—No. The royalty might be increased from 6d., and I think that is low.

15. Are the sawmillers satisfied with the regulations?—They have never made any complaint.

16. Has it come under your notice that scenic reserves have been made in unsuitable places, or where the land is valuable for settlement? We have had complaints from the settlers, but there is no ground for them. Quite recently there was a complaint from Catlin's asking that two reserves should be cut up for settlement, but I feel satisfied that it was the opossum-hunting that induced those people to make the application. Since the restrictions have been removed from the opossums there has been a big run on them by hunters, who are making a lot of money catching those animals.

17. Do you think the opossums are doing damage to the native bush?—I believe so.

18. Have you seen them damaging the trees?—No, but many men have come to the conclusion that they are destroying some of the younger bush-plants. I have reported on the matter recently.

19. Do you know whether the deer are coming down from the highlands and interfering with the farms?—Yes, they are. I have had to go into that matter, and have reported about it, especially with regard to the Rankleburn Forest.

20. Is there any other place where the same trouble has occurred?—No. They have been coming down on to the pastoral country at Morven Hills, but I do not think the damage there is very noticeable.

21. *Dr. Cockayne.*] Do they damage the ground crops on the Hawea Flat?—I have never heard any complaints about that place.

22. *The Chairman.*] I suppose it would be a very expensive matter to fence against the deer?—Yes. I made an estimate of a fence which ran into £700.

23. *Dr. Cockayne.*] Do you know of any deer-country which is not sheep-country?—No. The deer always come down to the lowest possible country in the winter.

24. Do you find that they are not confined to the open country, but stray into the forests?—They live in the forests, but come down to feed in the lower country.

25. *Mr. Clarke.*] Do you not think it would be very much better to estimate exactly each sawmill area as it was applied for instead of going on the rule-of-thumb business you have described?—To do so would be very costly. A man would not do more than 2 acres a day, and in a block of 800 acres it would prove a heavy matter.

26. Would not the accurate results that would be obtained more than pay for the labour?—They might, but I would not like to offer an opinion on the subject, because I do not know how long it would take to estimate a given area.

27. *The Chairman.*] How long does it take you to arrive at the contents of a 200-acre block on the method you describe?—About three days.

28. *Dr. Cockayne.*] Have you ever heard the name "brown-birch" used in Otago?—No.

29. Or "white-birch"?—Yes.

30. Or "black-birch"?—Yes.

31. Or "red-birch"?—Yes.

32. Or "silver-birch"?—Yes.

33. Any other name relating to "birch"?—No.

34. *Mr. Lethbridge.*] Are there any Maori reserves in your district near any forest?—Yes, in one place there is a considerable Native reserve, all bush.

35. Good timber?—About the average. There is a lot of kamahi.

35A. *Dr. Cockayne.*] Is kamahi milled at all here?—No; but it is used for mining-props.

36. Have you ever heard it called "birch"?—Yes, by the settlers about the mills.

JOHN ROBERTSON SCOTT sworn and examined. (No. 12.)

1. *The Chairman.*] Is there any statement you would like to make, Mr. Scott?—I am the secretary of the South Island Dairy Association, and as to the question of some other timber taking the place of white-pine for butter-boxes, I may say that years ago we tried white-birch out of the Waipori Forest, at Henley, and we made a fairly good case; but the wood proved brittle and very unsuitable. There is no timber as suitable as white-pine for cheese and butter boxes.

2. Locally is the white-pine used as cut, or do you paraffin the boxes?—They paraffin the boxes and line them with parchment paper to prevent the acid getting out of the wood.

3. In your opinion are there any other New Zealand timbers which, if so treated, would be suitable for butter-boxes?—I am afraid not. In our experiments we have found nothing else suitable.

4. From whom could we get the result of those experiments?—Mr. Cuddie, the Dairy Commissioner, might be the best man to go to. In Australia the butter-boxes are made almost exclusively of white-pine. The Canadian Commissioner in his report compliments New Zealand on its butter-boxes as landed in London, and says they are superior to the Canadian ones.

5. At what price are the white-pine boxes supplied here?—They cost about 1s. 8½d., and at one time we used to give 1s. for them.

6. Have you seen the imported boxes Mr. Moritzen is trying to put on the market now?—No, but I do not think any resinous timber would be any good for butter.

7. *Mr. Lethbridge.*] What are you going to do when the white-pine runs out?—That is the trouble. Year after year we have passed resolutions at our meetings, without effect, asking the Government to put an export duty on white-pine; but while we can get it we do not grudge the increased cost. With the drain on us from Australia the problem is becoming very serious indeed. The cost of the boxes has risen steadily, a portion of the increase being due to labour. But a jump in four years from 1s. to 1s. 8½d. is not wholly due to labour; in fact, the labouring-man is not getting it.

8. *The Chairman.*] Are you acquainted with the class of land the kahikatea timber grows on?—Yes; it is very good land indeed, but if neglected grows weeds very quickly.

9. If cultivated, would not that land produce a large quantity of butter-fat?—It is fine dairying country, all that Catlin's land.

10. Would it pay the Government to leave that land in kahikatea for a number of years, or turn it into cultivated land yielding butter-fat?—I think it would pay better to leave it in kahikatea timber.

11. You advocate the prohibition of the export of kahikatea?—Yes.

12. Would it not pay the country better to cultivate the land when the rents derived would return a greater revenue than keeping it in timber?—I admit all you say, but my trouble is, what are we going to do for timber in a few years' time?

13. *Mr. Lethbridge.*] What does Canada do?—They have plenty of timber, but their boxes are not as good as ours, and they have no export trade now.

14. *Dr. Cockayne.*] Has not Siberia?—Yes, but their butter has but a short distance to go compared with ours.

15. *Mr. Murdoch.*] Have you ever tried tawa?—No. I do not think it grows down here.

16. No, it only grows in the North Island, and I think it is the only substitute you could get here?—If so, I suggest that the Commission should get some boxes made and try it.

17. I suppose you are aware that in the working-up of the white-pine we only utilize 50 per cent. of it for butter-boxes?—I am aware of that.

18. Would it not be possible to use the off-cuts of this timber for butter-boxes?—You must have a uniform size.

19. Yes, but would it matter so long as you got the boxes how many boards they were composed of?—It would not make any difference, provided the joining was good, and you had the parchment lining and used the paraffin. That is only my opinion. I am not an expert.

ALEXANDER CHARLES ROSS sworn and examined. (No. 13.)

1. *The Chairman.*] What is your position?—I am the Dairy Instructor and Grader, and have been here three years and three months, having been transferred from Taranaki, where I was two years in the Government service. Prior to that for seven years I was manager of a dairy factory.

2. Did you ever try any experiments with other timber than white-pine for butter-boxes?—Some years ago, in Southland, when I was managing secretary of a factory, some cheese-crates were sent down from Dunedin. They were not made of white-pine, but a kind of birch. They proved unsuitable, being too brittle.

3. Is it necessary to paraffin timber for cheese-crates?—No, as long as it is strong and pliable.

4. Do you know the tawa?—No.

5. Have you seen the imported boxes Mr. Moritzen has here?—I was shown a sample last night, but they seemed to have a resinous smell, and I do not think they will suit. They may.

6. Do you know anything about the Canadian system of packing butter?—No; Mr. Singleton, who has been in Canada, can tell you about it.

7. Is much land in Otago devoted to dairying and cheesemaking?—It is an increasing industry, especially in Catlin's district.

8. *Dr. Cockayne.*] How long would it be before the resin would taint the butter?—Before it had been packed two weeks.

9. Supposing we had no kahikatea in New Zealand, could birch be used for butter-boxes?—I could not say. As long as the timber does not taint the butter I see no objection to it.

10. *Mr. Murdoch.*] As to the present waste of white-pine, would it matter if the cases were made of different sizes of timber?—If we had a "white" box it might not matter. The tops and bottoms would have to be in one piece, but perhaps two pieces would do at the sides if they were properly fastened. We can use a lot of the timber that is at present rejected for the local trade, reserving the best for the export trade.

11. *Mr. Lethbridge.*] Do you think they get more knocking about on the sea voyage than in the railway-trucks here?—No. Once on the boat they get very little knocking about. The worst handling is out of the trucks into the steamer.

FAIRLIE, SATURDAY, 15TH MARCH, 1913

ROBERT LINDSAY BANKS sworn and examined. (No. 14.)

1. *The Chairman.*] What are you, Mr. Banks?—I am the engineer to the Mackenzie County Council, and my headquarters are at Fairlie.

2. Has your Council done much tree-planting?—Yes. Some of the trees in our plantations, which you would see as you came along, were planted in 1882, but they were not planted close enough to lose the side branches, having been planted from 9 ft. to 10 ft. apart. A lot of the planting done by the County Council in the old days has been practically lost through the mixed planting.

3. *Mr. Adams.*] I suppose you planted *Pinus insignis* with the others?—Yes, and they choked them; the *Pinus* growing so quickly crowed the others out.

4. With that exception the others have kept pace with one another?—Yes.

5. *Mr. Clarke.*] What was the effect of planting *Pinus Laricio?*—We did not spend any money on them. We found it the easiest to plant *Pinus pinaster*.

6. *The Chairman.*] What is the age of the larches at Lake Tekapo?—About fifteen years. We started planting there in 1893, but I do not think any survived.

7. *Dr. Cockayne.*] Have any been cut down by frosts?—No, but we lost a lot of *insignis* down here. That lake never freezes; it is always above 32°.

8. *Mr. Lethbridge.*] How many do you plant a year?—We spend about £100 a year in planting, and get the work done for £6 a thousand, including the trees. There is no guarantee. With a guarantee the cost would be about £10.

9. *The Chairman.*] How many do you plant to the acre at £6 per thousand?—8 ft. apart they would run 680 to the acre, but we have been planting them closer, and now they run from 1,000 to 1,500 to the acre. We have planted out 100,000 3 ft. apart.

10. Do the nurserymen plant them out for £6?—Yes, and the cost of the fencing is outside that. We pay £1 a chain for rabbit-proof fencing. The County Council asked the Government some years ago to take over the planting of this county, and do the work on a bigger scale, because it is a treeless district, but we did not succeed.

11. *Mr. Adams.*] Have you some good reserves?—Yes, there were a lot set aside for planting purposes in Mr. Baker's time as Commissioner, and we get rents from them, which are spent in further planting.

12. *The Chairman.*] What terms are those reserves leased for?—I think, by the year.

13. *Mr. Adams.*] What is the quality of the land?—The best to be got there, the reserves being picked out on account of the land.

14. *Mr. Lethbridge.*] Is there any Crown land adjacent to those reserves?—They are Crown lands held on lease.

15. *Dr. Cockayne.*] Are they on the flat?—Some are on the flat, and some on the low-lying hills.

CHRISTCHURCH, TUESDAY, 18TH MARCH, 1913.

EDWARD HERRING sworn and examined. (No. 15.)

1. *The Chairman.*] Do you wish to make a statement?—I am a retired farmer, and have been thirty-one years in Canterbury, and I was a member for many years of the Ashburton County Council. I have had much experience in tree-planting, and have met with success. I planted *insignis* principally, also *ponderosa* and *Douglasii*. I planted 9 ft. apart, the outer row being *Pinus insignis*, and then a row of deciduous trees. The *insignis* did very well, but the latter badly. The soil was shingly. The locality was Alford Forest, Ashburton County. The rainfall was 79·6, on an average. I strongly advocated the planting of larch, but the Chairman of the County Council opposed it on the ground that the rainfall was deficient. Finally the plantation was made of larch, and a few months ago I was informed the trees had grown to a height of 40 ft. They are thirty years old.

2. Did planting the trees 9 ft. apart ensure their growing up without putting out side branches?—The branches died away as the trees grew, and I do not think the stems became knotted. The effect of the plantations has been to improve the plains by restraining the floods, and also to improve the stock by providing them with much-needed shelter. The cutting-out of the Alford Forest was a crime, as the trees were no good for timber

3. *Dr. Cockayne.*] Did you plant the trees on the level or the slopes?—On level land between the two rivers, in strips 1 chain wide.

4. How do you know they were free from knots?—Because the boughs died off.

5. What was the capital value of this land at the time you planted it?—About £3 an acre, and it is now worth £5.

6. *Mr. Murdoch.*] Because of the plantation?—Partly. Without shelter-belts it would be worth 50 per cent. less. There is very great benefit to the sheep on account of the shelter.

7. *Dr. Cockayne.*] Have you seen *Pinus insignis* used for building purposes?—No. A storm did no damage to the *insignis*, but cut the deciduous trees down.

8. Is there any accurate information as to the effect the cutting-down of Alford Forest has had on the streams and river?—No, but many ravines have been made by rain-storms since the bush was cleared.

9. *Mr. Lethbridge.*] Have you calculated the cost of making your plantations?—I did, but my books have been destroyed.

10. Did you raise the trees from seed?—I purchased them from a nursery at a very low price. My wool was the finest a certain buyer bought, and I attribute its quality to the shelter the sheep got from these plantations.

RICHARD D. GRADY sworn and examined. (No. 16.)

1. *Witness*, a member of the firm of A. M. Grady and Co., attended and submitted samples of brushes made from the fibre of the *Cordyline* (cabbage-tree). He stated that the articles were made by hand, but he was unable to disclose the process. They were not on the market, but he wished the Government to take up the process for the benefit of the inmates confined in different public institutions. A dairy brush for the use of farmers could be sold for 2s. 6d., and a clothes-brush for 3s. They were very durable articles. The fibre made excellent cordage, comparing well with manila. Sixty per cent. of the bulk sample of the leaf could be placed on the market. The process of preparing the fibre he would not indicate. For upholsterers it was an excellent material. He had not taken out a patent because he wanted the Government to take it up. The prepared fibre would stand the rain.

JOSEPH CORNISH HELMORE sworn and examined. (No. 17.)

1. *The Chairman.*] I understand you have had some experience in tree-planting?—Yes. Some years ago, at Sherwood, I planted four shelter-plantations half a mile long and about 1½ chains wide, one being entirely of oak. I sowed the acorns *in situ*, scattering them broadcast, and ploughed them in. The result was most successful, a fine oak forest growing up. The age of the trees would now be fifteen years. There is a foot of soil before you come to the shingle. If I did the work over again I would not sow the acorns broadcast, but in rows about 1½ yards apart. I also planted some bark-wattle, but they were cut down every year by frost; eventually they grew into good trees. I had other shelters of pines; but I recommend for the Canterbury Plains the *Cedar deodara* and the *atlantica*.

2. Would you recommend the planting of oaks for commercial purposes?—Certainly.

3. *Mr. Adams.*] What about the difficulty of getting sufficient seeds of the *atlantica?*—I planted the plants.

4. *Dr. Cockayne.*] Have you noticed how in the North Park if it were not for the grazing there would be in a few years an oak forest?—Of course there would be; also sycamores. I found the gums no good at all. They grew into bare poles—wretched-looking things—and took too long to grow. The frosts cut them down, and they want good soil.

5. *Mr. Clarke.*] Did you plant the blue-gum?—Yes, at Sherwood, between Rakaia and Methven. The spruce did not do.

6. *Mr. Adams.*] Did you try larch?—Yes; they did very well; also the prickly acacia, which is valuable for posts.

7. *Mr. Clarke.*] Did the frost interfere with the growth of the gums?—It checked it.

HENRY GEORGE ELL, M.P., sworn and examined. (No. 18.)

1. *The Chairman.*] I understand you wish to tender some evidence in regard to afforestation matters?—Yes. With regard to the great use timber is put for local purposes, I might say I was informed by one manufacturer yesterday that he required at least 300,000 ft. per annum of native timbers. Another informed me that his firm's requirements for timber for casing was about 500,000 ft. per annum. One manager of a factory in Nelson informed me he wanted 500,000 ft. per annum, and another said he required from 250,000 ft. to 300,000 ft. per annum. As to the existing forests and how long they will last, you have that information, but I wish to emphasize the need for more tree-planting throughout this Dominion. The present policy of the Department of limiting their operations to certain districts is entirely wrong. In Taranaki there are no State forests beyond the natural ones, which are being rapidly cut out; there are none in Hawke's Bay, Wellington, or Canterbury. Hanmer is beyond Canterbury. In Marlborough there are none. At Dumgree some planting is going on. The mistake, in my judgment, in connection with the present policy is that the Canterbury people, for instance, will have to bear the cost of the transit of the timber from Hanmer. To get that timber out economically it will be necessary to run a railway into the plantation; otherwise the cost of haulage would make the timber too dear for profitable use. If the people of the districts I have mentioned have not timber-supplies handy they will certainly suffer. There should be State forests in every provincial district, and there is plenty of poor land available for the purpose.

2. *Mr. Murdoch.*] Could you indicate where the localities are?—There is plenty in the immediate neighbourhood of Wellington—precipitous, hilly, broken country. I could not say whether it is Crown land or private. The Government are planting on very poor land in other places.

3. *The Chairman.*] But it is not of a precipitous nature?—I am not in a position to discuss that phase of the question. The timbermen find it profitable to cut timber in precipitous country, and go to a great expense in doing so. I would not advise planting in country where there is only a soil-depth of from 6 in. to 18 in., but where there is plenty of soil even on precipitous country the trees will grow.

4. *Mr. Adams.*] What do you think of the proposal to plant the reserve held by the Waimakariri Protective Board?—That country is suitable, and ought to be planted, being so near a large industrial centre. In Taranaki in a few years' time thousands of farmers will have to go far afield to get even their posts or firewood.

5. *Mr. Lethbridge.*] They can grow timber for posts?—I know that, but they are not doing so, unfortunately.

6. *The Charman.*] Would you advocate that the settlers should be offered special encouragement to plant shelter-belts?—Yes; provided the right kinds of trees were planted on the advice of a Government expert, I would exempt them from some taxation.

7. *Mr. Clarke.*] Do you think that would be a wise policy in view of the fact that another man might buy the settler out and cut the plantation down?—I see your contention.

8. Would it not be better to allow the settler to purchase the trees at cost price for his own purposes, but, as far as timber-producing for commercial purposes is concerned, to keep the matter under State control, and in large areas rather than in small shelter-belts?—I desire to see both systems adopted. Of course, before the State would allow exemption in regard to land-tax or local rates, certain covenants should be provided that the trees should be allowed to grow to maturity.

9. *Dr. Cockayne.*] The land would be sold subject to the plantation remaining intact?—Yes.

10. *The Chairman.*] Have you heard of any damage being done to the native forests by wandering herds of deer?—I have protested on more than one occasion against the deer being allowed to roam freely all over the country. They should be restricted to certain areas.

11. *Dr. Cockayne.*] Do you think such an area as the Waimakariri National Park should be used as a deer-park?—I do not. The national interest should not be sacrificed to one particular sport.

12. *The Chairman.*] Are there any other matters you wish to mention?—With regard to the question of encouraging on scientific lines the planting of trees, I consider that the planting in Canterbury, excepting in the case of Mr. Adams, a member of this Commission, has been carried on on haphazard lines, with nobody to instruct the farmers as to the best kinds of trees to plant, or to direct the operations of the local bodies.

13. Has not Mr. Robinson, the Superintending Nurseryman, been available?—Yes; but that is not sufficient. When the Hon. Mr. McNab was in office I suggested that in every land district an expert forester should be associated with its staff, to advise the local bodies and farmers, and the agricultural and pastoral associations, on tree-planting, and so help to create a stronger public opinion thereon. Many of the Road Boards and County Councils have waste river-bed lands under their control, and waste lands on roadsides, and expert advice would lead to the planting of such land.

14. *Dr. Cockayne.*] Are you aware that throughout the Empire, with the exception of India, scientific forestry is almost a new science, and it would be a most difficult matter to obtain a number of men with the necessary attainments? Do you think, therefore, one of the recommendations of this Commission should be in the direction of the training of young men as scientific foresters?—I do.

15. Do you think that as we have good University colleges we could train these men in our own country?—I do, and the system should be established without delay.

16. *Mr. Murdoch.*] Your last suggestion, as to placing competent foresters in each land district, appeals to me—it is badly wanted—but until the highly trained men referred to are available, do you not think we have men in the Dominion now who are sufficiently competent to carry

on the work?—The man occupying this position should have an office, say, here, with instructive leaflets available, and authority to go before a Road Board or a County Council, or other local body, that has under its control waste lands, and he should endeavour to induce them to plant those areas. Such an officer would earn his salary many times over.

17. *Dr. Cockayne.*] I am not making any reflection on the officers here now in suggesting the appointment of highly trained scientific men—they are most excellent men—I am not reflecting on certain men who may be in New Zealand and who would probably be suitable for this work; but if forestry is to be put on right lines a great number of men may be required, and they are not here?—I think trained scientific men are very necessary. A mere planter of trees is not sufficient. He should have a knowledge of soils, the qualities of trees, their habits, and the age necessary before they can produce marketable timber.

18. *Mr. Lethbridge.*] Would not that be a matter of experience and of experiment largely?—Yes.

19. *Mr. Clarke.*] Do you not think our officers here could, with a scientifically trained man to assist in the way you suggest, do what was required without the necessity of having all these men referred to with university qualifications?—The man you speak of is merely a skilled labourer, and can be got by the hundred in this country. You want to go beyond that.

20. You would not appoint him to control men?—No. The latter would form part of the staff of a forestry officer in charge of a district.

21. *Mr. Adams.*] Has not Mr. Robinson taken considerable pains to train some men?—Yes, in the art of planting only. But I do think it is essential that for a man to be a successful forester he must undergo a certain amount of scientific training.

22. *Dr. Cockayne.*] One timber we could find out all particulars about is *Pinus radiata*, because we have it here old enough; but would not work of that kind require a very distinct scientific training?—Yes; a man must have scientific training and instruction.

23. *Mr. Lethbridge.*] Are you aware that one-half the royalty on timber in certain parts of New Zealand goes to the local body?—Yes.

24. Seeing we are short of funds for forestry, do you not think that a moiety of that one-half royalty should go to the Forestry Department instead of all to the local body?—I do. The millers rarely use the main roads, but draw their timber from the forests to the nearest railway-line without touching the roads. It is not a justifiable concession to the local bodies, and the money should go to encourage forestry. I wish to put in a parliamentary paper—C.-1c, 1907—dealing with the forestry operations of the Government. I wish to call attention to the serious statement in this return, that at the outside the oldest trees in the Government plantations are not fourteen years old, and that they could not come into use until nearly sixty years from now. I do not think the country is doing its duty, or has done it for years past, in this matter.

24A. *Dr. Cockayne.*] A lot of private planting has been done ever since the "fifties" in all parts of New Zealand, and forms an object-lesson as to the effect of tree-planting on soil and climate; but about these trees we know very little. Would it not be for the benefit of the public, and of future forestry, if a proper scientific and economic survey were made of these plantations from north to south?—It would be very useful, because it would enable the Government to see the extent private planting has gone in the direction of supplying future requirements. But if you drew on the whole area planted it would be but a fleabite as compared with the needs of the country in the matter of timber. As to the effect of denudation of our hill-lands, that can be seen in the case of the precipitous lands in the North Island, which is subject to heavier downpours than we have here, and where the ridges of the hills have been washed bare down to the rock. Later on the land will become poorer and poorer, while the low country will be subject to disastrous floods. Even the covering soil on some of our Christchurch hills is being washed away and deposited on the flats. It is very necessary that the forest covering should be preserved on all the ridges in precipitous country, or what has been left of it. It is not necessary to leave the timber-trees—they can be removed; but the scrub ought to be preserved.

25. *Mr. Clarke.*] What do you think should be done with such a reserve as the Waipoua Forest, in the North Island, which is a valuable kauri forest?—It should be preserved because of its unique character as a kauri forest, and we should not look only at the commercial interest—the sentimental side of life should be considered. Therefore, that forest should be preserved as a national reserve.

26. *Mr. Murdoch.*] It is difficult to save a kauri forest from fire, and if it is decided to remove the restriction on this forest do you not think the Government should cut it up themselves?—I do, but I hope the milling will be done with greater care than at Kakahi Government sawmill, where there is as much waste as in any private milling-area. This brings me to the question of greater supervision being required over the milling of timber. I have seen trees felled 5 ft. and 6 ft. from the ground; in all milling-areas there should be Rangers on the spot to supervise the felling of trees.

27. *The Chairman.*] Do you not think the time has arrived when more accurate methods should be applied to the measuring of timber?—All our timber should be very accurately measured, and the milling supervised by a Government officer, to stop the waste going on. In some places the millers pay for the timber off the saw, and that is an incentive to waste. Likewise all forests should be managed under one authority, and not, as at present, under a divided one in some cases—the Lands Department and the Warden.

28. *Mr. Murdoch.*] Do you think the Forestry Department should stand by itself instead of forming a branch of the Lands Department?—I do.

29. *Dr. Cockayne.*] In the event of its being kept under the Lands Department, do you think a Board of practical and scientific men to advise would be better than the present method of leaving the matter in the hands of the Under-Secretary entirely?—I am decidedly of that opinion, because you might have an excellent Under-Secretary with no experience as a forester.

30. A combined Board would possess more knowledge than one man?—Yes. I believe the Board would not only have greater powers of administration, and therefore be more efficient, but it would stimulate public interest in this question. From inquiries I have made in the butter-factories I think the time has arrived when we should conserve the white-pine forests for the needs of the butter industry.

31. *The Chairman.*] You are probably aware that land where kahikatea grows is of a rich nature, suitable for dairying. If locked up for milling-timber the State might lose considerably in rentals more than it would get by way of royalty on the timber. Which would be the best course—to throw it open for settlement and take the rents, or keep it in timber and take the royalty?—I am not looking at the royalty or the rental, but at the known needs of an industry that requires this timber for butter-boxes.

32. Other countries, such as Canada and Siberia, utilize other timbers, paraffining the wood?—I assume the dairy people here cannot get other timber equally as good and cheap as the white-pine. If they can do so my suggestion falls to the ground. We shall not be able to draw supplies from America, as their forests are being depleted. Oregon pine is going up in price, and we only get the second class. It is estimated that in twenty to twenty-five years the yellow-pine forests will be cut out. Russia commenced planting two hundred and fifty years ago, and is now reaping the benefit.

33. *Dr. Cockayne.*] Do you think it advisable to grow timber at an apparent loss rather than not at all?—Yes.

34. *The Chairman.*] Have you any views as to the scenic reserves?—I am sorry to see what is going on now. Sale plans have passed through my hands recently covering thousands of acres of heavily timbered land, and not an acre has been set aside as a reserve.

35. *Mr. Lethbridge.*] Can you point the places out?—I can submit some of the plans relating to Hawke's Bay, Auckland, and Southland.

36. Is it not possible there might be large scenic reserves in the neighbourhood of these blocks?—There is nothing to indicate them on the plans.

37. *Dr. Cockayne.*] You look on these reserves as natural museums as well?—I do.

38. Where all types of trees, plants, and insect life indigenous to our native forests should be preserved as samples?—Yes. I would also make reserves showing the character of all the plants and soils associated with the various forests, and containing specimens of the different native forest-trees. In Taranaki and in other parts the settlers have applied to the Government to buy some little scrap of forest that has escaped the settlers' fire.

39. *Mr. Lethbridge.*] Do you not think these small reserves are very often a nursery for noxious weeds and rabbits?—I have seen blackberry on poor land and in open country.

40. I mean small areas?—I do not regard from 20 to 25 acres as a small reserve; it is big enough to be worth looking after. I have heard of cattle being turned into a scenic reserve.

41. *Dr. Cockayne.*] Where there was a rare plant such as the Chatham Island lily, would you stipulate that such places should be fenced off and declared sacred?—I would. I advocate the setting-aside of reserves for the preservation of the animal and bird life of this country. The time will come when people will not smile at these proposals, but a truly national sentiment in regard to them will be evoked.

42. *The Chairman.*] Do you know anything of the lasting properties of beech?—I saw a house at Otarama built of that wood. It was between twenty-five and thirty years old, and the timber was sound.

JOHN HENRY MAYNARD sworn and examined. (No. 19.)

1. *The Chairman.*] What is your position?—I am the secretary of the Canterbury Builders and Contractors' Association. A committee of our association was appointed to consider the matter and submit to you any suggestions bearing on your inquiry. The following was resolved: Seeing that the Commission is constituted of such capable men, and that Dr. Cockayne and Mr. Adams are especially well conversant with all the conditions bearing on the subject as far as Canterbury is concerned, and knowing also that the builders' representative, Mr. Clarke, is one of the best authorities in the country as to the most suitable timbers to grow for building purposes, we have every confidence that the questions at issue are in good hands, and we are content to leave them there. I believe the suggestion emanated from this association that a Commission of this kind should be appointed, as we are of opinion something should be done in the direction of the inquiry at once.

2. You derive your supply of timber chiefly from Westland?—Yes

3. Do you import any birch or beech?—Very little is used here. It is used in the country, and in the past I have used black-birch from Oxford and Alford Forests for building. It is used for bridges. *Pinus insignis* is used for farm buildings, and a quantity is cut at Barewood now It is not fit for ordinary building purposes.

4. *Dr. Cockayne.*] Have you only known of black-birch?—I have known of red-birch, which is found on the West Coast.

5. Have you heard of white or silver birch?—Yes, but they are not reckoned good enough for building purposes.

6. *Mr. Adams.*] What has been the main objection to birch in Canterbury?—You must use it straight from the mill. That means using it in its green state, consequently there is considerable shrinkage. Buildings I erected twenty years ago in Ashburton of black-birch are in a good state of preservation now.

7. *Dr. Cockayne.*] With a shortage of timber in New Zealand I suppose black-birch would be better than nothing?—Considerably.

8. Do you think it right that forests of that timber should be burnt?—Decidedly not.

9. Would a proper examination of our birch forests be useful to the country?—I think it would be very useful. There is probably a prejudice more than anything else against the black-birch.

10. *Mr. Murdoch.*] Does not all the birch timber shrink or warp?—To some extent. If you put sufficient lead into the paint the weatherboards will stand well. Twenty years ago I built a cottage for Mr. C. J. Harper, and it is still in a good state of preservation.

11. You could not stock it?—Not for weatherboards, but for scantlings.

MORTON ANDERSON, M.D., sworn and examined. (No. 20.)

1. *The Chairman.*] You are vice-president of the Acclimatization Society of North Canterbury?—Yes.

2. It has been represented to the Commission that the unrestricted roaming of the deer through the national parks may prove detrimental to the trees. Does your society think they should be restricted to certain areas in order to prevent such damage?—They cannot do any harm up the Rakaia Gorge. They form a great attraction to tourists, who belong to a money-spending class.

3. Do you know what amount is spent in deer-stalking licenses?—Our herd has not brought in a great deal yet, as it was only started in 1897, and I estimate their numbers at about 550. They are spread over many thousands of acres far back from any agricultural country.

4. It has been represented that they are eating out in some places the flora in the native forests, exposing the bush to danger from fire. Has that phase of the question occurred to you?—They are not doing any harm to the bush in the Rakaia. I was up there once deer-stalking, and noticed they were rubbing their antlers on the trees and on the wild-irishmen growing in the river-bed. The latter were dying on account of being practically ring-barked. Some of the forest trees were marked with something like a blaze in one part, but it did not go round the tree. I do not think it would have any serious effect.

5. *Dr. Cockayne.*] It is essential that at the headwaters of the Waimakariri the forest should be preserved, in order to protect the plains from floods. I heard that deer had been turned into this national park in order to allow them to mingle with the Rakaia herd and other herds, so as to have one vast herd of deer right through the north of the Island and along the eastern slopes of the Southern Alps. Do you think it right there should be any risk of that forest being destroyed by these animals?—It would not be right, but I do not see how they are going to introduce the element of danger. Deer-stalkers do not start bush-fires.

6. I am referring to the danger to the forests from the deer themselves?—They certainly make tracks in the forest, but they do not clear out the undergrowth.

7. Do you think the deer should be confined to specific areas, to be known as deer-parks, for sporting purposes, and declared vermin outside those parks?—They would roam into the forest all the same.

8. I take exception to the deer that have been turned out in the River Poulter district. May there not be danger to that forest in time when those deer multiply?—I have not sufficient experience of the subject to say definitely one way or another, but as far as my own observation went at the Mathias and the Rakaia I could not see that they were doing any damage to the bush.

9. *The Chairman.*] Perhaps your society will discuss the matter and forward their observations to the Commission?—We might do that. No complaints have reached me as yet.

CHARLES CHILTON, M.D., D.Sc., sworn and examined. (No. 21.)

1. *The Chairman.*] You are a professor at Canterbury College, and have travelled considerably in New Zealand, and must have noticed the universal destruction of forest. Do you consider that in all cases this is justifiable?—I have noticed that our forests are disappearing, and as one interested in botany I have been horrified at the rapidity with which the bush is going. This has been particularly noticeable up the Main Trunk line between Wellington and Auckland within the last four years. At Lake Wakatipu a lot of the bush along the head of the lake has disappeared within recent years.

2. In what cases do you consider that removal of forest is contrary to the interests of the Dominion?—That is very difficult to answer. In certain cases the forest must go—where land is valuable—but other cases should be seriously considered before the bush is cut down. I should be inclined to be conservative in regard to keeping the forest intact unless some definite gain is to be obtained by its removal. We have to bear in mind the increased cost of modern forestry operations.

3. *Mr. Lethbridge.*] Are there any particular spots you would like preserved?—All places which are essential to climatic conditions, and forests on the mountains and at the headwaters of the rivers, in order to conserve the water-supply. A proper survey would have to be made of the right kinds of areas that should be preserved, and then I presume an Act of Parliament would be required to finally deal with them and reserve them.

4. *Mr. Adams.*] In your opinion does the forest affect the rainfall?—It is a much-disputed question, and the general conclusion is that the actual rainfall cannot be increased by the forests,

but that the retaining power of the land is largely increased by the bush covering, which acts like a sponge and prevents the water running away too rapidly. You have a constant supply instead of an intermittent one.

5. *The Chairman.*] Can you give any specific examples of where permanent climatic reserves should be made?—One is already reserved—the Waimakariri National Park—and it should be made a reserve also as far as the forest is concerned. Canterbury College is a botanical resort, and one of its greatest assets in this connection is that park. Its proximity to the College makes it invaluable to students, and we should look to the needs of both present and future students. Another forest that should be preserved is at the headwaters of the Rakaia. It is a mixed bush of manuka, totara, and other trees, and is fairly accessible.

6. Apart from the value of scenic reserves for aesthetic purposes, what do you consider their importance from the standpoint of education?—They are extremely important from the point of view of pure botany. There is nothing like the variety in the European and English woods there is in New Zealand, which offers enormous advantages in that respect. If forestry in New Zealand is to be placed on a scientific basis the forests must be retained for demonstration purposes.

7. Do you consider that areas other than forest—*e.g.*, swamps, dunes, alpine meadows, &c. —should be made into scenic reserves for educational purposes?—Yes, it would be extremely desirable to have areas of that kind bearing on the general question of forestry; they are places of extreme interest botanically. In comparison to the Yorkshire moors, some of our swamps are far more interesting fields of research, and they bear on the general question of the science of forestry. It may also happen that if the natural flora is preserved in this manner you might thereby be able to gain a proper knowledge of some tree which at present we have not a full knowledge of, and which may become extinct before science has discovered all its uses. Not only do the trees become extinct, but we ought to know something about the matter from the point of view of zoology, and so preserve many types of animals and insects that would otherwise become extinct also. Of course, as it is a great many of the smaller animals have become almost extinct from the want of the application of this science.

8. Do you consider that men admitted into the Forestry Department should have a special scientific training?—I certainly think so; that is the general tendency in all industries, and in the science of agriculture, medicine, and other subjects. In medicine and agriculture through actual experience a great deal of valuable knowledge has been obtained, whereas forestry is a new subject.

9. What branches of science should they be fairly conversant with?—Forestry is not a science in itself, but the application of various sciences to a particular purpose, and it is necessary to have an acquaintance with the fundamental sciences that affect work of that kind. At Edinburgh University the students have to study botany, zoology, physics (including meteorology), chemistry, organic chemistry, mathematics, and entomology, and the different applications of all these subjects to forestry.

10. *Dr. Cockayne.*] Where in Edinburgh do they get their practical knowledge?—A certain amount is obtained by visiting the private estates. They have no public forests there. But it is actually stated in the University regulations that in connection with the essential part of the practical work students are recommended to go to Germany, as there are no State Forests they can use in the British Islands. That is also recommended at the Oxford School of Forestry; or they should go to France.

11. *The Chairman.*] What is the present position in New Zealand for obtaining such a training as you might consider desirable?—The fundamental sciences are all being taught in our University colleges. We have the Agricultural College at Lincoln, and the experimental stations of the Agricultural Department.

12. Would it be practicable for the New Zealand University to give a diploma in forestry of a grade somewhat lower than that for B.Sc.?—Yes. I am doubtful about the legal position, as to whether we can give that diploma without an Act of Parliament. We could issue a degree of Bachelor in Forestry under the present charter, and not make the regulations up to the standard of the present B.A. But the different University colleges have power to give a diploma themselves.

13. *Dr. Cockayne.*] Could the men in the lower grades of a forestry department be given a diploma in agriculture after two years' study?—It would be quite possible for the colleges to issue such a diploma, just as they do in connection with engineering and mining.

14. And such men could take their practical work at the present State nurseries?—Yes.

15. *The Chairman.*] What remuneration would you consider sufficient at the commencement for a young man who is entering the forest service, in view of the fact that the Transvaal Government is sending cadets to the Forestry School at Oxford under the condition that they enter the forest service at £200 a year, with annual increments?—£200 would not be too much for the full course such as you have at Edinburgh. If they do not want such a long training you might start them lower; the initial salary does not matter so much as long as there is some certainty of its increasing afterwards.

16. Would a forest laboratory be a valuable adjunct to the Forestry Department?—You might have one situated in a forest, where botanical research could be carried on. It would be not only useful but absolutely essential if forestry is to be put on a proper basis. The Chemical Department in Wellington could be utilized for some of the work, and the Geological Department for other aspects of it. There should also be a laboratory in the forest itself, as the experimental raising of trees under different conditions would have to be done in a forest, as it could not be done in a city like Wellington.

ROBERT NAIRN sworn and examined. (No. 22.)

1. *The Chairman.*] You are a nurseryman?—Yes, a member of the firm of Nairn and Sons.

2. Do you grow trees on a large scale for forestry purposes?—Yes, of many different kinds.

3. What is the average time from the planting in the nursery until the trees are ready to send out?—From two to four years; pines about two years, and the deciduous trees from three to four years.

4. At what price per thousand does the nursery sell forest-trees?—By making a speciality of pines and forest trees generally we could beat the man engaged in general nursery work. They would be grown on cheaper land admitting of horse-labour. Under these circumstances it is a profitable industry. I can supply you with a price-list of our forest-trees.

5. From the building point of view, what timber do you consider most profitable to grow?—Many mistakes have been made in the past as to the character of the trees that should be planted, and now we are limiting the industry to trees that can be grown successfully for commercial purposes. *Laricio, insignis, ponderosa, Douglasii* can be grown under favourable conditions; the larch in valleys and in places where there is plenty of moisture.

6. What age would some be you have planted out?—Twenty years.

6A. At what distance apart?—Too far, according to present forestry ideas.

7. What about the gums?—More of the gums should be grown on the plains and on land which is of little value. In California, which has a climate similar to ours, they grow gums with great success.

8. What do you think of the poplar as a timber for certain purposes?—None of the authorities are favourable to its being used as a timber. I advocate the planting of *mnolifera* and *tremula*. The latter furnishes the soil with food, and forms first-class shelter.

9. *Mr. Lethbridge.*] What authorities did you look up as to the poplar?—Bailey, an American authority; and Nicholson.

10. What about its utility for paper-pulp?—They did not say anything about that.

11. *Mr. Murdoch.*] As a shelter-plant it is very good?—Nothing better. I advocate poplar *pyramidalis* for shelter for orchards.

12. *The Chairman.*] Would a belt of poplars 1 chain wide be an effective fire-break?—Yes, because it does not catch fire easily.

13. *Dr. Cockayne.*] Are you acquainted with Maw's work on forestry?—No.

14. He writes as follows regarding the black Italian poplar: "The timber is white, soft, and tough, and does not easily fracture. It is more nearly fireproof than any other timber, and for this reason should be often used for floor-boards." Do you think that wood would do for butter-boxes?—It should do very well, being cheaply grown, and light, and of a suitable colour.

15. Do you think a 4-chain belt around a pine forest would make that forest virtually fireproof?—I think it would.

16. As regards the propagation of poplar, would it be cheaper to raise a thousand *Pinus Laricio* or a thousand poplars?—A thousand poplars, easily.

17. Would you grow the cuttings in the nursery?—Yes, packed quite close together. It may be necessary to strike them in the nursery first. They grow much quicker than *Laricio.* No preparation is needed for the planting of poplars. They are very much the cheapest; but the advantage of putting them in the nursery is that they would be prepared ready to put in their proper place straight away, and you can work amongst them better.

18. *Mr. Adams.*] Would not one difficulty be getting sufficient cuttings?—After the second year you could get as many cuttings as you wanted.

19. *The Chairman.*] Has your firm undertaken the planting of large areas by contract or otherwise?—I do not do that kind of work. It is limited to two firms in Ashburton, where land is very much cheaper than here.

20. That is a large factor in forestry operations, on account of the mounting-up of the compound interest in connection with the rental value. Have you gone into that aspect of the question?—It would not be possible to carry on such operations on a large scale close to a city excepting on poor land.

21. *Dr. Cockayne.*] Does it make any difference if you grow trees on good soil on the low lands for subsequent planting-out in other places, or on the actual spot where they are to finally remain?—It does not make much difference if your plants are well prepared. If you have a soil suitable for lifting purposes—soil with a dash of clay in it—the plants transplant better. It depends on the soil and not so much on the locality, and how they have been raised.

22. Is it now almost useless to grow *Cupressus macrocarpa?*—Not at all. Many are still grown, and very successfully, reaching to very large size. I have seen some diseased, but when grown from healthy seeds they grow up strong and well.

WILLIAM BLYTH BUCKHURST sworn and examined. (No. 23.)

1. *The Chairman.*] You are the Crown Lands Ranger for North Canterbury?—Yes. I have been here six years, and have a good acquaintance with the northern district.

2. Do you visit the scenic reserves occasionally?—Yes.

3. Have you heard any complaints about them becoming breeding-grounds for noxious weeds?—Yes, but not as a rule; only one or two instances. One was at Four Peaks, but it is not in my district.

4. Were the complaints justified?—Quite possibly they might be. Rabbits and weeds accumulating on the edges of these reserves might become a nuisance unless closely watched.

5. Have any of the reserves complained of ever been vested in a local body?—In some case, like the Selwyn Plantation Board, they have been. They are vested in a Domain Board; but, as a rule, the Lands Department supervise them.

6. Has anything come under your notice as to damage done by deer in State forests, or to settlements?—Not in North Canterbury. They are at the headwaters of the Rakaia, but are not doing any harm.

7. *Dr. Cockayne.*] What about Marlborough?—I heard complaints there from settlers on the north bank of the Wairau that the deer come down and eat the turnips and worry the domestic stock.

8. Do you consider they are detrimental to the forests and the young growth?—They are likely to bark the trees, and where the forest has been destroyed and is growing again, if deer are allowed to roam through the bush they would destroy the growth; but in old standing bush I do not think they do much harm, or more harm than cattle.

9. They would tend to check regeneration?—Decidedly.

10. *The Chairman.*] I understand you have done a good deal of estimating and measuring of timber?—Yes, in the North Island, and I was in the timber trade for some years. To estimate growing timber requires considerable experience.

11. Could any reliance be placed on an estimate of growing timbers comprised in a district of many miles extent, such estimate being made at a few days' notice?—Very little, unless the man were a keen observer. As a rule such estimates are not to be relied on.

12. *Dr. Cockayne.*] Could a man stand on a hill and look at the bush below him and tell the quantity of matai and miro there was in it?—No. When asked to report on the timbers in certain areas I found it hopeless to expect to be able to do it accurately, and so I simply reported what I thought would be an estimate of 1 acre, and then reckoned the whole area from that.

13. *The Chairman.*] It might happen under some estimates that when the bush was taken out there would only be in it half the timber estimated, or two or three times as much?—Quite so; because a lot of the timber included in the estimate might be absolutely worthless.

14. *Dr. Cockayne.*] What would you call the birch at Oxford?—Black—*Solandri.*

15. What do they call it in Wellington?—I have never heard it referred to there. Not much grows there.

16. How far north does it grow?—In Auckland, but it is very rare. I have seen it on Tutumohe Range.

17. Do you know *fusca?*—Only as "brown-birch"; in Marlborough chiefly.

18. Do you know *Menziesii?*—The "red-birch."

19. Where is it called that?—In Marlborough.

20. Have you ever seen any *fusca* in Canterbury?—There may be a little at Glynnwye, but you would have to search to find it.

21. Have you had any experience of *fusca* as a timber?—Only watching the mills cut it. It is used in Marlborough for rough building, but it twists a lot unless seasoned before cutting.

22. Have you had any experience with black-birch?—Yes, but that also is liable to twist, while the tannic acid is very hard on the saws. It is suitable for bridge-building, but not for houses.

23. Have you had any experience with *Menziesii?*—Only when I had it seasoned for making furniture. It takes a very nice polish.

24. *Mr. Murdoch.*] What formula did you use in measuring up round timber?—I used Hopper's generally. We would square one-fourth of the girth, take the length, and then the cubic contents. Multiply by 12 to get the superficial contents. Here timber is sold off the saw.

HENRY GAUNT PRICE sworn and examined. (No. 24.)

1. *The Chairman.*] In the absence of the Commisioner you have charge of the Lands Office here?—Yes.

2. Have any complaints been received from the settlers that some of the scenic reserves have been set apart in unsuitable places, and have become breeding-grounds for noxious weeds, &c.?—I do not remember any particular case of that kind. A sum of money is voted every year for the destruction of weeds, and when a Ranger reports that noxious weeds are spreading they are destroyed. I do not think your question applies to the scenery reserves here. In a treeless place like Canterbury, where we have forests we should preserve them. We should not deforest here.

3. Have you had any experience with deer here?—No. I was in Hawke's Bay, and there are deer at Lake Waikaremoana; but I never heard they had any bad effect on the forest.

4. Before coming here you had many years' experience in bush country as a surveyor?—Yes, principally in Hawke's Bay and Poverty Bay.

5. Is there any tawa timber there?—A considerable amount. It has not been used for sawmilling purposes, and I never heard of its being regarded as good building-timber. It is not lasting, but would do for butter-boxes.

6. *Dr. Cockayne.*] What does the forest at Motu consist of?—Pines—rimu, kahikatea, miro. There is not much beech in it. You will find that timber on the high ranges.

JOHN DRYDEN HALL sworn and examined. (No. 25.)

1. *The Chairman.*] What are you, Mr. Hall?—A farmer, residing at Hororata. I wish to call the attention of the Commission to a plantation reserve, No. 1763, in the Selwyn Survey District, on the Dunsandel–Hororata Road, on which there is now growing a dense growth of silver-wattles which have spread to the adjoining lands and are causing considerable damage to them. If the Commissioners were to see how useless this reserve is, and were to ascertain how expensive it will be to clear it and to plant it with desirable trees, I think they would be able to form some conclusion as to the undesirability of planting silver-wattles elsewhere. I own the adjoining land, and have cleared the wattles that had spread to it. The Plantation Board at my request dug a ditch, 4 by 3, to prevent the spread of the plants, and it has been successful. The plantation harbours rabbits, and in the present state is of no use to the district.

2. Do you consider the silver-wattle a noxious weed?—That is a strong term. It may be useful for some purpose, but in the interests of the farming community it is a bad plant to grow. I would like to get a remedy that would destroy it. The plantation consists of 100 acres, and I would pay 5s. rental an acre for the land cleared, but now it is useless.

3. Have you any other point to advance?—I suggest that all Crown leases should contain a covenant binding the tenant to plant in certain places if considered necessary suitable trees or seeds to be supplied by the Government. You can get at the Crown tenant and compel him to do certain things which are for his ultimate benefit.

4. What about future leases of the same property?—If the matter were put before the Crown tenant in the same way as it would be put before any ordinary farmer, and he were convinced of the benefit he would derive from the shelter—I speak as a farmer—he would spend a small sum not only in planting, but in taking care of the trees afterwards. Canterbury is conspicuous for absence of method in devising shelter plantations for the protection of stock. The plantations made by the Selwyn County Council are of great benefit, no doubt, to the whole district, but they would have acted very much better if they had been cut into L shapes, with little clumps and corners, rather than have been arranged in big strips.

5. *Dr. Cockayne.*] Would you advocate the planting of public roads?—The difficulty there is that if you plant the south-west side you shelter the stock but shade the road.

6. If you used deciduous trees you would not shade the road?—There are deciduous trees in the Riccarton Bush, and they form a case in support of what I say.

7. Have you tried *Salex salmonii*, a quick-growing willow?—No.

8. *The Chairman.*] Is there any other point?—One more: that information should be imparted to persons proposing to plant trees as to whether or not such trees will harbour birds. The diffidence that exists on the part of the Canterbury farmer to making plantations is the fear that they will prove a harbour for birds that will decimate his crops. I do not think he is justified in that conclusion, but it leads to a lack of energy in respect to tree-planting which is not creditable or desirable. My father planted many acres, and where they were of large size—the County Council plantations are 10 chains wide—they proved a great harbour for birds; but later on when he planted four rows deep in L shape there was no serious trouble with the birds.

9. They were purely for shelter purposes?—Yes.

10. You are interested in the dairy industry?—Yes.

11. And plantations would assist that by affording shelter to the stock?—Yes. I think the plantations of Mr. Bealey's were some of the first of deciduous trees in Canterbury. They consist of oaks, ash, elms, willows; but the inclination of the present-day farmer is to get the trees out and put grass in.

12. Do you know if any experiments have been made in this district with a view to testing other timber than white-pine as to its use for butter-boxes?—We get our timber from Southland for cheese-crates. We use the white-pine. I think the National Dairy Association stipulate that that timber must be used.

13. The tainting difficulty would not come in in the case of cheese-crates as it does in the case of butter-boxes?—No. Cheese does not absorb nearly as readily as butter. The cheese industry is much more likely to expand than the butter, as it does not require cool storage, like butter. I think it is quite possible that other timbers might be used almost entirely for cheese-crates.

RICHARD GEORGE ROBINSON sworn and examined. (No. 26.)

1. *The Chairman.*] You are the Chief Nurseryman for the South Island under the Lands Department?—Yes.

2. At what do you estimate the cost of planting an acre with forest trees at 4 ft. apart, including the raising of the trees?—In computing cost of and the anticipated returns from our afforestation labours a vast amount of speculative matter requires to be presented. The following information will serve to show at a glance the actual average expenditure per acre now incurred in raising trees and establishing a plantation. No provision is made for the initial value of the land or buildings, and the fencing item is based on the assumption that an area of about 1,000 acres is being afforested:—Nursery work: Initial expenses in formation of nursery, 1s. 3d.; tree-seed cost, 2s. 9d.; seed-sowing, 5d.; tending one- and two-year-old seedlings, 11d.; lifting and lining-out seedlings, 2s. 2d.; tending lined-out seedlings, 3s. 8d.; lifting and bundling for plantations, 3s. 6d.; transport of trees, 5d.; tools, implements, repairs, &c., 3d.; general maintenance work, 1s. 9d.; supervision, 6d.: cost of raising 1,000 trees for plan-

tation, 17s. 7d. Fencing, 3s. 2d.; rabbiting and clearing, 5s. 6d.; pitting for tree-planting, 12s. 6d.; tree-planting and distribution of trees, 13s. 9d.; formation of roads and fire-breaks, 1s. 3d.; tools, implements, repairs, &c., 1s. 3d.; supervision, 2s. 3d.: cost of planting and upkeep of 1,000 trees, £1 19s. 8d. Total raising and establishing cost, £2 17s. 3d. In the Rotorua State Nursery, where growth is more vigorous, it is possible to satisfactorily move a large number of two-year-old trees direct from seed-beds to the plantation, and this somewhat reduces the cost of production of certain trees to below the sum it costs in the South Island. As about 2,722 trees are usually planted over an acre of ground, it will thus be seen that the total estimated expenditure connected with the creation of an acre of plantation will approximately reach £8 4s. 2d., although the cost varies annually, being influenced by labour and climatic conditions.

3. What are your opinions regarding the employment of prison labour in connection with afforestation operations?—Prison labour is specially desirable for afforestation work (1) when large areas of land are being operated upon, (2) when the ground-surface is easily prepared, (3) in localities where extremes in temperature or persistent rainfalls are not general.

4. What do you estimate the annual value of each prisoner's work?—At Hanmer Springs each prisoner during the past twelve months has been credited with having performed labour representing a value of £73 4s. 1d., or an increase of £4 7s. 8d. per man on the preceding year.

5. What number of prisoners were at the Hanmer Springs camp during the past twelve months, and what is the total value of the work performed by them?—The average number of prisoners actually employed was 15·46, and the average number in camp was 24·2. The total value of work performed during the year was £1,134 13s. 3d., as against £992 14s. 1d. in the previous year. Virtually there were eight men allocated to the looking-after of the camp. Fifteen men are practically working full time the whole year, and these figures show that the labour of 15·46 prisoners is equal to that performed by ten free workers. So that a free worker is worth one-third more than a prisoner.

6. You say that £73 is the value of a prisoner's work: does that sum include the supervision by the warders?—No. We arrive at the value in this way: we know that a free worker can dig 1,000 pits at 12s. 6d. a thousand, and if a prisoner makes 1,000 pits he also is credited with the same amount of liability for making that number, 12s. 6d.; so that the warders are not reckoned, but merely the amount of work that is performed.

7. What do you consider is the most economical method of conducting the work—by prison or free labour?—Undoubtedly the employment of prison labour at tree-planting is satisfactory as far as the Forestry Branch of the Lands Department is concerned, but it must be remembered that the expenditure attached to the providing of board, accommodation, and clothing of inmates of prison camps is borne entirely by the Justice Department, whose hearty co-operation with the Lands Department has been instrumental in making such a success of the undertaking. In my opinion evidence from the Justice Department bearing on the actual camp maintenance-work, and necessary supervision by warders and Gaoler in charge, would require to be considered before it would be possible to state definitely if tree-planting by prison labour is the most economical method of conducting State afforestation generally. All statistics in connection with the work performed by prison labour could be submitted in the course of a few days, when the preparation of the annual statements of expenditure incurred, &c., will be completed. But the reformative value to the inmates of the tree-planting camps should not be overlooked when discussing the merits of prison labour.

8. What are your opinions regarding the distribution of trees to public institutions, local bodies, and private individuals?—If the distribution of trees from nurseries is undertaken without having made special provision for the same, the season's State tree-planting scheme is seriously interfered with. Many countries adopt a policy of distributing trees gratis to public bodies, but insist upon regulations governing the planting and subsequent maintenance-work being adhered to. Such plantations would undoubtedly be an asset to the Dominion. In my opinion much benefit would accrue if domains and public institutions were liberally assisted by the State in the matter of donations of trees, but planting conditions would require to be drawn up, otherwise indiscreet association of varieties and otherwise faulty planting methods would eventuate. Supplying trees to private individuals is another matter, and if private nurserymen are in the position to supply hardy stock at a reasonable rate to purchasers I see no reason why the State should enter into competition with them. It is, however, purely a matter of policy, but if the distribution of trees to domains, hospitals, schools, and other Government institutions were decided upon, such tree-raising would require to be distinct from the State's own afforestation work, and a special amount authorized annually for the purpose. If we were called on suddenly to supply large quantities of forest-trees to private people or public institutions it would interfere with our scheme of afforestation, and the quantity of land to be prepared the year before the scheme is put in force. When the matter is arranged I estimate the number of trees that would be ready for distribution at the proper time. A certain number of men are employed, and the required pits are dug three or four months in advance. So that if we were called upon at any time to distribute a large number of trees to public bodies it would mean that there would be a certain number of pits left over from that year, which under certain conditions would be valueless next year. There would therefore be an actual waste of the cost of making the pits.

9. Is it part of your duty to tender advice to public bodies in regard to tree-planting when they request you to do so?—Yes, every effort is made to assist public bodies by tendering solicited information, but, owing to pressure of departmental duties, rarely is it possible to do so to the desired extent. Collections of timbers, seeds, destructive insects, &c., are gradually being acquired, and in this way it is possible to transmit a great deal of information very accurately.

10. Would you advocate that the Government should print a small book dealing with the subject of tree-planting for the use of public bodies, specifying the trees which would do best and the proper methods of planting?—I think the suggestion is a good one. I also think that such a book was prepared by Mr. Matthews, and was ordered to be printed. We have gained considerable experience since that publication, and it could now be brought up to date, with chapters on the scientific aspect of the matter as well as on the practical side. With full illustrations it would prove a very valuable aid indeed.

11. Would you briefly allude to the varieties of trees you are now planting in the South Island, and state under what conditions they are used to advantage?—After sixteen years' experience the Department is in possession of valuable facts relating to the character of trees being operated upon in the various districts. This knowledge, blended with the demonstrations of enthusiastic private planters, and the literary efforts of eminent forestry experts, enables the work of the State to be carried on in the most modern way. Several years of experimenting revealed the undesirability of adhering in New Zealand to ideas expressed by Continental authorities, but such work also disclosed certain possibilities, and we are now confining our efforts in the South Island principally to the growing of the following trees, although some fifty varieties are included in the established plantations: *Pinus Laricio* (Corsican pine), *Pinus ponderosa* (yellow-pine), *Pinus Benthamiana* (Bentham's pine), *Pinus strobus* (Weymouth pine), *Pinus austriaca* (Austrian pine), *Pinus radiata* (remarkable pine), *Pinus muricata* (Bishop pine), *Pseudo-tsuga taxifolia* (Oregon pine), *Picea excelsa* (Norway spruce), *Picea sitchensis* (Sitka spruce), *Fraxinus excelsior* (English ash), *Fraxinus americana* (American ash), *Larix europœa* (European larch), *Larix leptolepis* (Japanese larch), *Quercus pedunculata* (English oak), *Juglans regia* (walnut), *Sequoia sempervirens* (redwood), *Thuja plicata* (white-cedar), *Alnus glutinosa* (alder), *Betula alba* (English birch), *Populus* (various), *Salix* (various). Briefly explained, the sheltered gullies, where generally greater humidity and fertility of soil is in evidence, are reserved for such trees as ash, Oregon pine, oak, walnut, &c.; on the fertile flats, ash, Oregon pine, Norway spruce, Sitka spruce, *Pinus ponderosa*. Hillsides having an inclination to a southerly aspect are planted with Japanese and European larch, but the Department is now greatly reducing the output of the European species. Partially exposed country, either level or hillside, is planted with *Pinus Laricio* and *Pinus austriaca;* and upon a surface of a rocky nature *P. ponderosa* or *P. Benthamiana* is used with success. These two latter-mentioned pines are also allotted the most exposed positions, and are undoubtedly the most useful trees for any situation or condition. Shelter-breaks are formed of *P. radiata, P. muricata, Populus fastigiata,* and English birch according to the suitability of each variety to the prevailing condition. Where much surface moisture is prevalent alder, poplars, and willows are introduced successfully.

12. I suppose you are still conducting certain experiments in connection with trees?—Yes; further experimental work is still in progress, and any practical idea bearing on the efficacy either in working-systems or suitable trees for certain localities I am ever ready to investigate. Preparations are being made this season to create an arboretum at each tree-raising station in the South Island, so that the character and progress of as many varieties of tree as possible will be watched and reported upon from time to time.

13. Have you any difficulty in securing suitable labour for tree-planting work?—Usually, No. The rate of wages paid in New Zealand, 8s. per day of eight hours, is apparently a sufficient inducement to suitable men. Much of the pitting and tree-planting work is performed by contract, and employees so engaged are able to earn up to 8s. 6d. and 9s. a day.

14. Does the State provide accommodation for the employees?—Yes, each plantation employee is provided with sleeping-accommodation in the form of a hut, tent, or part room of a house within the forest reserve.

15. Do the employees receive any other allowance?—Yes, firewood or coal is provided gratis.

16. Have you any regulations in force in connection with employees smoking in the plantations?—Yes. Regulations were issued to each officer in charge of a plantation to the effect that no wax matches must be brought into the plantation by any employee. The men are allowed to smoke, and are given "smoke-ohs" in the morning and afternoon. But I have found it almost impossible to prevent men from smoking if they so desire. The substitution of wooden matches for wax matches relieves the difficulty to some extent.

17. Is there any specified time for smoking?—No. They are allowed to have a few minutes off in the morning and afternoon.

18. When the men are working are they under the supervision of a foreman?—Yes, there is always a foreman in charge.

19. And he would make it his business to keep his eye on these men during the smoking period, and to see that no matches are likely to be thrown about so as to be a danger?—That is so.

20. *Mr. Murdoch.*] Can you indicate six trees you would preferably plant now which are fast growers, and would be likely to turn out the best building-timber?—*Pinus Laricio* or the Corsican pine, *Pinus ponderosa* (it will grow under almost any condition), Oregon pine, *Fraxinus excelsior,* Japanese larch, *Pinus radiata.*

21. What do you think of the *radiata?*—It would be an excellent rough timber. We have in Tapanui Nursery alone over 100,000 to be planted out next year. It would be possible to plant it a little farther apart than 4 ft., and I am arranging to plant it 6 ft. apart. I regret to say, speaking generally, that the present season has been most unfavourable for tree-planting, the worst since the start of the Tapanui Nursery; nevertheless there will be an output of trees that will compare favourably with previous years. The output will be about a million and a half.

22. *The Chairman.*] What are the wages paid to employees?—The foreman gets 9s. 6d. a day, and is a salaried officer. Other men are paid from 8s. to 8s. 6d. a day. The clerk is a salaried officer.

23. *Dr. Cockayne.*] Do you keep a record of the cost of planting out the trees?—Yes, to the halfpenny. Until quite recently I had to do the whole of the work myself, but now I have the assistance of a clerk.

24. Had you orders from the Department to do the work yourself, or did you do so of your own accord?—It was a recognized thing that I had to look after everything until the new departure.

25. Are you the general adviser on all matters of forestry for this Island?—Yes; the Domain Boards first communicate with the Head Office, and then their letters are sent to me to report on.

26. Have you anything to do with the instruction classes?—The work of education falls on me in connection with students in forestry.

27. *Mr. Adams.*] Is there anybody who could take the matter up if you were not doing it?—I do not know.

28. *The Chairman.*] What other duties have you?—I also look after the stores for the South Island, involving a sum of £7,000.

29. In the returns showing the cost of the nurseries for the year 1912 is any allowance made by way of interest on the money invested, or the rental value of the land?—No, that has not been kept. The amount shown is the actual cost.

30. *Dr. Cockayne.*] The Department has never taken into consideration the question of the compound interest?—Never. I have included any areas the Government have had to purchase; but the areas we have operated on in the South Island have been Crown land, and no allowance has been made in that case for compound interest.

31. Have you had any experience in this Island in regard to sowing *in situ*?—Yes, at Dusky Hill and Conical Hills, and the result has been a failure.

32. Have you ever tried burning the manuka scrub, and sowing on the same ground the seeds of eucalypti *in situ*?—Not in the South Island, but in my private experience I have been successful.

33. Have you seen the eucalypti on the Canterbury Plains which have been sown and raised *in situ*?—Yes, and I have charge of a number of those places.

34. What sowing *in situ* have you tried at Dusky Hill and the prison plantations?—The experiment we conducted under almost ideal conditions was the sowing of acorns. We were careful in selecting only the most vigorous seeds, and under ideal conditions the result was satisfactory.

35. Have you tried sowing any pines *in situ*?—I do not think they would be successful.

36. Are you aware that in a certain class of soil in New Zealand pines are coming up spontaneously?—In this country if you sowed *in situ* such trees as pines the leaders would be so interfered with that they probably would not get through at all; they are exceedingly delicate.

37. *The Chariman.*] Have you any suggestion to make as to the kind of country afforestation operations should be carried on in?—If we get any rougher ground than we are operating on at present we might as well stop planting.

38. *Dr. Cockayne.*] What kind of ground do they afforest in Germany?—Similar ground to ours, but they do not get the extremes of temperature we have here. An even temperature is a very important factor in successful tree-raising.

39. *Mr. Murdoch.*] Do you consider it best to have a central nursery for the South Island, or several scattered about in different places?—We have already established our nurseries, but when we started the system it would have been very much better to have had one big central nursery in the South Island. The trees sent down here from Dumgree have turned out very successful. It is quite possible for trees to be sent from anywhere in the South Island to Otago Central with success.

40. Then it would be advantageous to keep this central nursery here at Tapanui?—Tapanui is not a good place for a central nursery, the heavy soil being very much against it; and in bad weather the men have to be found work at other occupations, which makes our tree-planting unprofitable.

41. Where would you suggest for a central nursery?—I would not like to say unless an inspection of the areas could be made. Somewhere in the Timaru district might do.

42. *Mr. Adams.*] At Willowbridge, Studholme Junction?—Yes.

43. What became of the oaks planted at Hanmer some time ago?—They did very well; also the ash. The latter started a quick growth, but afterwards they went back. With the exception of the Dusky Hill plantation oak-growing has not been a success.

44. *Mr. Murdoch.*] Could a piece of poor country where the bush has been pretty well killed out, but where some may still be growing, be successfully planted with foreign trees?—Yes, in the case of any reserves which are pretty well worked out I think a system of underplanting could be successfully accomplished.

45. I refer to comparatively open milling-forests where the *Pinus insignis* has grown rapidly, exceeding everything. Have you seen such a case?—It is quite possible. It would grow very rapidly if sheltered.

46. *The Chairman.*] If a central nursery were established the cost of supplying trees to different parts of the Island would be cheaper than to establish nurseries at several places where separate staffs would have to be maintained?—Decidedly so.

47. And if you could double, or quadruple, your output the cost would be proportionately lessened?—Quite correct.

48. *Dr. Cockayne.*] From the data you have could it be definitely ascertained whether or not it would pay to abandon the present nurseries?—It would take a year to decide, and would require a series of experiments. No nursery should be started unless there is a large area of plantable land in the vicinity, and a nursery should not be isolated. I do not think the Government should attempt to afforest any area under 1,000 acres. There should not be only one plantation in its vicinity. I may say that the *Pinus Laricio* crop has been a failure this season all over the world, and it is our principal crop here.

GREYMOUTH, TUESDAY, 25TH MARCH, 1913.

Mr. G. H. BOYD and Mr. EDMUND STRATFORD sworn and examined. (Nos. 27 and 28.)

1. *The Chairman.*] What association do you represent?—The Westland Timber-millers' Association, Westland. We have held a meeting, and decided to place our views on the subject before the Commission in writing. There is nothing we wish to add now. The white-pine question is the main one from the millers' point of view.

2. Have you any remarks or suggestions to make, Mr. Boyd, regarding the question of the administration of the Timber Regulations, as to whether the system could be improved?—As far as the supervision of the cutting is concerned?

3. Yes, and the administration generally, especially with respect to the dual control of the Commissioner of Crown Lands and the Warden?—We have not taken that point into consideration particularly. As you know, dual control is always difficult. Personally, I think it would be better if the matter were put under one control. But here we work under the mining laws also, and I do not really see how you are going to get away from the present system as far as this district is concerned.

4. It can be got away from. There are mining laws in force in the Auckland District, and there is no difficulty experienced there. Perhaps your association would like to go into the matter and forward the Commission an expression of opinion on the subject in writing?—I am quite sure our association would rather work under the Land Board, but we can go into the matter more fully and forward our views in writing.

5. It would strengthen the case if you could give specific instances of the way in which the control is at present conflicting, and where it entails loss both to the miller and the Crown?—I do not think we would have any difficulty about doing that.

6. Have you anything to add?—I do not think so. The waterside workers intend, I think, to address the Commission in writing, and to protest against any duty being imposed on silver-pine, as it would affect their earning-powers.

7. *Mr. Clarke.*] In your written statement you might include a suggestion as to what timbers the Sawmillers' Association consider would be suitable for their trade when our own timbers have been worked out; because we must assume, although you are sawmillers now, your successors will be timber-dealers in the future. Will you consider that?—We have gone into that point, but the information at our disposal on the subject was very limited. No experimental planting has taken place on the West Coast, and we think the Commission might look into the matter and arrange that some steps should be taken to provide for future timber-supplies in this district. We have here large plateaux that are absolutely bare, and that is where the silver-pine grows; it is a hardy wood. Possibly ground that would grow such timber would also grow some of the Australian hard woods. We have no frosts on the Coast.

8. *Dr. Cockayne.*] I think the *pakihi* land could be afforested, and it would be the best way to deal with it: what do you think?—Yes, it might do. There is a lot of land on the West Coast that can never be suitable for agriculture, and to plant it would be the best way to deal with it. But there are a lot of areas here that are not *pakihi* land.

9. *The Chairman.*] We have to consider the question of the compound interest on the value of the land mounting up all the time, and so swelling the initial cost that it might be found at the end, say, of a hundred years that it is costing £500 to produce £100 worth of timber. Have you considered that aspect?—Well, all the hard wood is going up in price in Australia all the time, and as far as cheap land is concerned you cannot get cheaper land than *pakihi*, because it is absolutely valueless.

NELSON, THURSDAY, 27TH MARCH, 1913.

JOHN POLLOCK sworn and examined. (No. 29.)

1. *The Chairman.*] During our investigations it has been suggested by some witnesses that the unrestricted roaming of deer through the climatic reserves will tend to the destruction of the young trees, and stop the regeneration of the forests. Are you prepared to give any evidence on the point?—I understand the deer do clear out the underscrub, and young trees in some cases, and everything within their reach.

2. What is your official position?—I presume I am here as chairman of the council of the acclimatization society. I have been all my life in this district, and spent some years in the field as a cadet surveyor.

3. Has it come under your notice that the deer are doing damage to the forests?—I do not think they are barking the trees, but they are certainly eating out all the underscrub and young trees.

4. Are they doing any damage to the settlers' orchards?—We have had complaints from settlers on the Moutere Hills, but, as far as we can ascertain, there is only one very small herd there of a dozen red deer; and the population is very small.

5. Are the deer generally distributed throughout the ranges here?—Yes, they are, pretty well, in this province.

6. Does your society allow the settlers to shoot the deer indiscriminately where they interfere with settlements?—We have no power to so allow them. The settlers can apply to the Minister of Internal Affairs for a permit. We received these complaints before the opening of the deer-stalking season, and we deferred dealing with them until the season closed, when probably the nuisance will have been abated by the season's shooting—the months of March and April.

7. Do you think it would be wise to have certain restricted areas set aside as deer-parks, treating all deer found outside those areas as a pest and destroying them?—It would be safe to treat them as a pest if found in areas set aside for forest conservation, water-supply purposes, or catchment-areas; but it would be rather a drastic step to specify a few small areas as deer-parks, and make them vermin in the rest of a very large district.

8. Are they multiplying rapidly?—Yes, and spreading well. A few years ago there were no deer at the head of the Wangapeka, the Buller, and at Karamea: now they are all over that country.

9. Have you any idea as to the number of deer in the district?—No; a great area of our district is not even used by deer-stalkers.

10. *Dr. Cockayne.*] You spoke about small areas for deer-parks, but I do not think that is the idea of the Commission. In Canterbury deer have been turned out in certain parts. There is the Rakaia herd, and those interested in the sport think it would be a good thing if this herd could mix with the Nelson herd, and form one continuous herd throughout the whole northern part of the Southern Alps. This Canterbury herd has been placed in the Waimakariri National Park, on which that part of the country depends so much in connection with flood-prevention. Do you think it is reasonable that such large continuous areas should be turned into a deer-park, a large part of which is a climatic reserve?—It seems a question of climatic reserves as against the deer. I do not see how you can confine the deer to one part. You must let them roam or else clear out the whole lot.

11. Could you not provide that in certain areas it would be legal to shoot them, and in others—which would be deer-parks—it would be illegal to do so?—I should be very much opposed to such a provision, because that would be fatal to the conservation of deer, and to the society deriving any revenue from sportsmen for the improvement of the herds. If you had free country to shoot in men would not take out any licenses, but would shoot in that free country.

12. How many English tourists take out licenses to shoot deer in the Nelson area?—Not many; I do not think we average four or five a year. We are hardly in the line of tourists here.

13. Does the sport bring people here from other parts of New Zealand?—Yes, but it is a matter of only six weeks or two months at the most.

14. *Mr. Murdoch.*] Can you suggest a solution of the difficulty?—It is a difficult matter, the only alternative being extermination if the animals are doing the damage alleged. If they roam through the whole forest and are damaging the underscrub—they do not affect the forest-trees—of course, the question of the trees as against the deer comes in, and the latter would have to go. But the question is whether they are eating the underscrub, and doing such serious damage to the bush.

15. *The Chairman.*] There is the further question of whether, if the underscrub is eaten out, it would not render these forests more liable to the danger of fire?—I presume it would, but the underscrub, being green, is hard to burn.

16. Would not the destruction of the undergrowth render the land liable to the growth of noxious weeds?—Yes.

JAMES SIM EVANS sworn and examined. (No. 30.)

1. *The Chairman.*] I understand you are the Stipendiary Magistrate and Warden for the Nelson District?—Yes. I travel about this district, and if there is anything that comes in the way of my duties that I can give you information upon I shall be pleased to do so.

2. The question of the dual control of the timber industry in the mining districts is being considered by the Commission. I do not know if the provision in force in the Westland Land District as to the timber in a mining-area being administered by the Warden applies here also?—Yes, in the mining district.

3. Is the dual control a satisfactory method, in your opinion, of dealing with the timber?—I have never had any application in this district for a timber license, and I have been here nearly four years. I practised as a lawyer in Riverton, where there is a good deal of timber, and I have had experience in regard to making application for timber licenses; but I think that the Warden should have the control of the granting of timber strictly for mining purposes, but not for sawmilling purposes. I know that many mining-areas are taken up by grants from the Warden and are used for ordinary sawmilling purposes, and not for mining. In that case the matter should be under the control of the Commissioner.

4. The Warden having no Rangers or officers he can use to exercise the proper control over the sawmillers?—No. The Warden's license should be strictly confined to timber-cutting for mining-props, &c.

5. Have you had opportunities of noting if the deer are doing any damage to the forests?—I know the Tapanui country and the Blue Mountains, and I know what deer are like down there. I do not think you can confine them to a particular area.

6. *Dr. Cockayne.*] Could you limit them to the Tapanui Mountains with one of the Umbrella Mountains?—No.

7. *Mr. Adams.*] Do you think they will become so numerous as to be a source of danger to the native flora and forests?—I do not think so, or any more than the wild cattle used to be, or the wild pigs, in parts of Southland.

8. *Dr. Cockayne.*] But they were exterminated by the settlers?—Yes, for their hides.

9. *Mr. Murdoch.*] Is there not a danger of the deer clearing out the young trees so that the forest will never regenerate?—I dare say there is a positive danger in that respect, but I do not know whether they are attacking the bark like the rabbits.

10. *Mr. Adams.*] Do you know anything about the scenic reserves in this district?—I have travelled between here and Collingwood, and very much regretted to see the way in which the beautiful bush there has been slashed about and burnt. It ought to be preserved on each side of the road. The land there can never be cultivated, being very stony, and only fit for grazing cattle, or sheep perhaps. There is still some bush left, and it is a very fine bit of scenery. The same remark applies to the Buller Gorge, which in some places is fast becoming a mass of blackened stumps. Some of the land there is lease in perpetuity, but a good deal is freehold. It is not high-priced land, being steep and rocky. There is a large hill of marble there. The outcrop is a mile in width, and runs for miles across the mountains, and the land is fit for nothing but to run a few sheep on. In 100 acres you would only get 10 acres of grass.

11. *Mr. Clarke.*] Have you issued no timber licenses for four years?—None that I can remember.

12. Does that mean there has been no mining-work carried on during that time?—Oh, no; but the mines that are working are established mines, having their timber-cutting licenses before I came here. There are one or two mills working at Collingwood, nominally mining mills, but I think they send out timber. The ordinary miner is entitled to cut timber on Crown lands for his own purpose, and the old-established companies have their rights along with their mining-rights.

13. Do their mining-rights give them the right to cut timber and sell it for market purposes?—Nominally, they do not; but in practice they do that.

14. Are they within their rights in selling it?—I think so. I do not think there would be anything to restrict them, or any ground for forfeiture. Stricter regulations might be drawn up if the Warden is to have the right to grant timber in that way. The Mining Regulations were primarily drawn up to deal with mining-timber only, but in practice I know they do sell.

14a. Practically speaking, then, they are abusing their rights by taking advantage of a technicality?—I would not say they have abused their rights, or that their rights would be liable to forfeiture for selling the timber for other than mining purposes.

15. Should the regulations be made stricter for the purpose of allowing miners to have timber for their own purposes, or for other purposes?—Only for mining purposes, which was the original intention.

16. Would it not be possible for a man to apply for a timber-cutting license under these conditions when he had no hope of obtaining any good mining result?—He could nominally apply for it for mining purposes, and could cut and sell timber, although there was no possibility of starting a mine.

17. Is not that evasion?—I am not prepared to commit myself at present to saying whether a man who does that is committing a breach or not; but the matter requires looking into.

18. Then the matter should not be under a dual control?—I am quite satisfied about that; but I do think that timber for mining purposes should be under the control of the Warden, because all the mining ought to be under his supervision.

19. *The Chairman.*] Is there any other matter you wish to allude to?—There is a question as to the granting of rights outside a mining district that may come within your province. My opinion is that the Warden should have the right to grant all rights, either for mining for gold or timber rights, whether inside or outside the mining district; but with regard to mining-rights applied for outside the mining district, no grant should be made by the Warden until he receives a report from the Commissioner of Crown Lands. I am quite sure this system would be satisfactory to the Commissioners, who do not like dealing with mining-rights, and it is within the province of the Warden. But the Commissioner's interests would be sufficiently safeguarded if no grants were made outside the mining district, either for timber-cutting or mining, without first getting a report from the Commissioner.

20. Would it not be better to say that the question of timber shall be left in the hands of the Lands Department, the miller not to be allowed to cut timber without the license being endorsed by yourself?—I would have no objection to that; but, seeing that the Warden is solely concerned with mining, it might be better to consider that question from a mining point of view. I have known Commissioners of Crown Lands who have been rather antagonistic to mining, and I do not blame them, as I have seen fine Crown lands washed away by mining operations.

21. There is a provision in the law at present that certain areas in mining districts should be set aside as Warden's areas, the administration of the timber being left in the hands of the Commissioner of Crown Lands. That is the case in the Auckland District. If this provision were in force in Nelson and Westland would it meet the case?—Yes, anything of that sort. I do not quite agree with taking the control of large areas of timber, particularly in sawmilling country, out of the hands of the Commissioner. If there is a restricted area of timber and there is a large mining industry, it is advisable that the Warden should have power to recommend a reservation for mining purposes, the one industry fostering the other.

22. You are probably aware of the provision in the Mining Act enabling a holder of a miner's right to peg out a tent-site, 24 by 48, without any reference to the Warden or Commissioner. Men sometimes take out one of these miner's rights and squat on Crown lands while they possibly have not any connection at all with mining?—Yes, a man can do that.

23. Do you not think at this stage in the history of mining such a right is no longer required giving a man the opportunity of occupying Crown land without any reference to Warden or Commissioner?—There are difficulties about the matter. I think it should be stopped except for *bona fide* mining. You could get over it that way, or by making registration compulsory, not charging any fee perhaps. Under the present circumstances a man can get a grant of an acre of land and can hold it for forty-two years, for 5s. a year, with a right of renewal.

24. *Mr. Clarke.*] Without any prospect of getting gold?—It does not matter whether he is mining or not; as long as he is in a mining district he can get it. In the early days it was necessary to grant a certain amount of freedom, but now that the mining industry is on a more settled basis these rights should be limited to mining only.

FREDERICK AUGUSTUS THOMPSON sworn and examined. (No. 31.)

1. *The Chairman.*] You are Commissioner of Crown Lands and Chief Surveyor for the Nelson Land District?—Yes. I have been here as Commissioner about nine months, but I have spent fourteen years in the district altogether. I left it many years ago, and was engaged in survey-work in the Oamaru district and in the Grey Valley, returning here as Commissioner a few months ago.

2. Have you had any recent complaints that the scenic reserves are becoming breeding-grounds for noxious weeds, and are blocking land-settlement?—Yes, a good many complaints to that effect, but they were from people who were interested in acquiring the land. It became a common expression to say that if a man wanted a piece of a scenic reserve it was infested with blackberries.

3. You think that in the majority of cases these complaints were not justified?—They were not from a public point of view. Possibly there were a good many weeds on them. In some cases portions of the scenic reserves have been burnt, become denuded of timber, and then full of rubbish and weeds.

4. Are there any specific cases where you can recommend the Commission to uplift the reserve and throw the land open for settlement?—Not to any great extent. The main cases are where such reserves have been made without due consideration—land that would be better adapted for a homestead-site, and which has without proper care been declared a scenic reserve.

5. I understand that in certain cases you have already had the reservation uplifted?—I have in several cases recommended that the reservation should be uplifted, and the Scenery Board has gone into the matter.

6. Do you think the present method of first getting the recommendation of the Land Board and then referring the matter to the Scenery Preservation Board is quite ample in regard to safeguarding the same?—Yes, it would be ample. In all cases we get full reports from the Ranger or surveyor. It is very desirable that there should not be power to uplift them too drastically. The present process seems the best, as it does not allow anything to be done hurriedly and without proper consideration. The Land Board has first to pass the resolution that it is desirable to lift the reservation with the idea of utilizing the land for a homestead-site.

7. Are there any places in this district you can recommend to be set aside as climatic reserves for water-conservation purposes?—Yes; I will indicate them on a map I will forward shortly.

8. Do you consider the present method of administering the timber under a dual control is satisfactory?—No, for this reason: in the first place the sawmilling business is really distinct from mining, and, as far as the records are concerned, we have to do the work twice over. One office looks after the granting of the titles, and is supposed to record them, while the other office has to collect the revenue. In fact, one office is a receiving office and the other is a collecting one. It would be better if the collecting office and receiving office were combined.

9. Do you consider that if the matter were administered under the regulations of the Land Act, 1908, it would be a much better system?—If they were carried out in their entirety they would meet the case.

10. Do you consider the time has now arrived when timber disposed of on Crown lands should be measured correctly before it is offered for sale?—Where land is disposed of by public tender the timber thereon should be specified and measured up. A proper estimate should be made tree by tree.

11. Do you think that would tend to prevent waste?—I think so. There is a tendency to waste timber and to work it out in a slovenly manner, and it would be better if each party knew within a reasonable time what they were buying.

12. Do you consider the estimates of the timber on Crown lands which have been published by the Department at various times, especially in the Report on Forestry for 1909, at all reliable?—No. I do not think they are more than merely a shot at the quantity.

13. In the case of country which has never been explored they must be simply a guess?—Practically. A practical man going through the bush would have a good knowledge of the quantity, but I do not think this work has been done with anything like accuracy.

14. You do not think a man standing on a hilltop overlooking miles of country would be able to estimate how much rimu, kahikatea, and miro would be in that bush?—Not if he did it that way. In some cases the estimates may have been based on more careful averages.

15. But in a district where there are thousands of acres practically unexplored?—You could not do it anything like near the mark.

16. *Mr. Clarke.*] If it is a rough shot would it not be just as likely to be overestimated as to be underestimated?—The chances are about equal.

17. You would not suggest that although not approximately correct they are absolutely unreliable?—I have not any certain information on the matter. I have generally found they might give you a good idea as to what sort of bush you might have in a place, but not a very close estimate if worked out block by block.

18. *Mr. Adams.*] Some witnesses thought it was very much of an underestimate. What is your opinion?—I have not gone into it.

19. Would it be more likely to be underestimated than overestimated?—It is impossible for me to answer that question.

20. *Mr. Murdoch.*] Do you think those estimates give even an approximate idea of the timber in any district?—A careful man would be able to work it out as an estimate only if he went through the country carefully. It would be no use my saying whether the estimates referred to are right or wrong. I can only say from the premises that it was just a rough shot.

21. *Dr. Cockayne.*] Referring to the so-called "beech," which consists of a number of different species; have you any estimate of these species, as to how many of them are available in connection with any particular timber, or are they all lumped together as one "beech" only?—As far as I know they are all lumped, and no distinction is made.

22. Therefore the figures are of no value as to the commercial possibilities of our forests in that respect?—They would not be of much use.

23. *The Chairman.*] You have had a certain experience of the Westland Land District?——Yes, two years and a half.

24. Would you say that the amount of timber in that district for commercial use greatly exceeded what there is in this district?—I do not know very much about the southern part of Westland, but I think there must be a good deal more timber there than here.

25. In the 1909 return I was rather struck with the statement that the quantity in Nelson was approximately as 4 to 5 as against Westland. Do you think that is correct?—I think there must be more timber in Westland.

FREDERICK GILES GIBBS sworn and examined. (No. 32.)

1. *The Chairman.*] You are a Master of Arts and connected with Nelson College?—Yes. I have resided in this district since 1876.

2. Have you any remarks to make as to the matter we are inquiring into?—I have rambled through the forests practically all round this bay, and on the west coast to a certain extent, in the neighbourhood of Karamea, and on the high ranges round Blind Bay, and I am pretty familiar with the country for a distance back from the seaboard.

3. Is that forest-clad land?—Yes, up to an elevation of a little over 4,000 ft. The bush consists of the various species of beech.

4. Have you specially observed the result of forest-destruction as regards the denudation of the soil?—Yes. Denudation has been very apparent in many places. Where the steeper hill-sides have been denuded of forest, within a few years afterwards a great deal of the soil has gradually slipped from the hillsides and left the country comparatively bare.

5. Has it had any effect on the streams that used to flow from those areas?—I cannot say that I have noticed a diminution in the streams, and without measurements it would be difficult to give any definite statement on the subject.

6. Are you acquainted with any scenic reserves?—Yes.

7. Generally speaking, are they in good order and free from weeds?—Most of the scenic resorts are well covered with bush, so that the blackberry and other weeds have gained very little hold.

8. Are there any forests in this district you can recommend as reservations for the preservation of the natural vegetation?—Yes; for some time past a number of us have been making efforts to secure the reservation of a block of 1,200 acres which is wedged in between two other reserves, but which if cut out would constitute a great source of danger from fire. Both lie at the back of the range behind Nelson, to the eastern side, but a difficulty has occurred owing to the land being included in the national-endowment lands. There seems to be some legal difficulty over the matter, but we have represented it to Wellington several times.

9. *Mr. Thompson* (Commissioner of Crown Lands): May I say, Mr. Chairman, that the piece referred to is national-endowment land, but under the amending Land Act of 1912 there is power to exchange it, and we are going to exchange it for 1,200 acres in the new block we are opening up That will meet the case. It is desirable to make it a reserve, and I have recommended accordingly.

10. *The Chairman.*] Do you wish to add anything, Mr. Gibbs?—Yesterday I mentioned to Mr. Thompson another matter he immediately fell in with: that the reserves made at Lakes Rotoiti and Rotoroa should be extended to take in their watersheds, to save the danger from fire. We have brought under the notice of the Minister the necessity of making a reserve of the upper part of the Cobb Valley, one of the tributaries of the Takaka Valley. It is one of the most beautiful valleys around Nelson, and should certainly be preserved. A small piece of freehold in the bottom of the valley might be left undisturbed, as it serves to assist to keep open the tracks to the forest. I also suggest the Kiwi Valley, a branch of the Wangapeka, should be reserved.

11. During your rambles did you notice that the deer were doing any harm to the forest?—It is the opinion of many in Nelson that the deer are becoming numerous, and that they are doing a great deal of harm and threatening the bush with extermination. Personally, I think their fears are often exaggerated, because, although the deer must, of course, do damage and eat a great deal of vegetation, during the thirty years I have been wandering about I cannot say, excepting perhaps in a few localities, that I have noticed very much difference with regard to the thickness of the bush. There are some places where deer are plentiful, and where the forest is becoming more park-like and free from undergrowth. If they become much more numerous no doubt that position would extend. At present I do not think the deer are plentiful enough in the district to threaten the bush seriously with extermination, although I know that experts in bush matters hold the contrary opinion.

12. Have you noticed whether, in addition to eating the young shrubs, they also eat the bark of the trees?—They have been very destructive in many orchards about Nelson. Last year I saw an orchard at Moutere where two or three deer had done a lot of damage to about 500 trees, up one row and down another. That was an orchard many acres in extent.

13. And it is practically impossible for orchardists to fence against them?—Yes, without going to considerable expense.

14. If the deer were allowed to become very much more numerous, would there be still greater danger of the young flora being eaten, and so exposing the forest to the risk of fire?—Yes, if they became much more numerous. They would also change the composition of the forest, and would extinguish certain species before they eat others.

15. *Dr. Cockayne.*] As to the high mountain-tops, in Canterbury they are used for sheep-grazing: are the tops of the high western mountains in Nelson also used for sheep-grazing?—Yes; on the ranges between Takaka and Collingwood there are a number of sheep depastured—above the bush-line—and they do very well indeed there. I do not think sheep are depastured to the westward of the Takaka Valley. Cattle are turned out on the Goodin Downs and on the Mount Arthur plateau.

16. In the beech forests did you notice whether the trees are diseased or healthy?—They seem to differ very much according to the locality. On our eastern ranges it is the general experience that the birch forests are very greatly diseased. It is difficult to find sound birch-trees of any size. Last week my attention was called to the fact that down the Buller nearly all the birch-trees felled recently in the McGowan Valley are perfectly sound. A surveyor told me that the birch on the high elevations was all perfectly sound, whereas on the eastern range of Nelson the contrary is the rule.

17. In view of the fact that certain species are likely to be of proved commercial value in the future, do you think an economic and scientific examination of the beech forests with regard to their regenerating-powers should be undertaken?—That would seem to be obvious, and would be of very great importance.

RICHARD EDWARD HARRIS sworn and examined. (No. 33.)

1. *The Chairman.*] What are you?—Crown Lands Ranger for the Nelson District.

2. Is it part of your duty to overlook the timber-areas?—Yes.

3. Is the timber administered by the Warden or the Commissioner of Crown Lands?—Some by the Warden and some by the Commissioner.

4. How many mills are there in operation?—Twenty-three or twenty-four.

5. How many of them come under the jurisdiction of the Commissioner of Crown Lands?—Two.

6. When a miller wishes to acquire an area of land for milling, how does he proceed?—He generally gives me instructions to measure the timber on it.

7. Is the area surveyed first?—Yes. They have been all old sections in State forests in years gone by.

8. Have you any difficulty in picking out those old boundaries?—No.

9. What is your method for measuring timber?—I generally measure the circumference of a tree, and get the height as nearly as possible, and then work out the contents by the formula. I use the Hopper's measurement.

10. Does the miller pay on the estimated quantity?—Yes.

11. Is it sold by auction or public tender?—By auction generally.

12. Do you find the millers are satisfied with the Department's estimates?—They are well satisfied so far, and there have been no complaints.

13. Do you consider that a more satisfactory method of dealing with timber than allowing a sawmiller to go through the bush and pay on the output that comes from his mill of the actual sound timber?—Oh, yes! We get all the revenue, and they get all the timber out of the bush. There is no waste.

14. In regard to the areas which come under the Warden: what method is adopted there?—The applicant erects his sawmill, cuts the timber out and ships it away and sells it. There is no one to supervise it.

15. Do they pay royalty?—I could not tell you, as I have nothing to do with it. The Receiver of Gold Revenue collects the revenue.

16. When he collects the revenue does he hand it over to the Receiver of Land Revenue?—I do not know anything about it, as we have no instructions to check these matters at all.

17. Has the Receiver of Gold Revenue any method of checking the amounts?—None at all.

18. He has no Ranger?—No.

19. Therefore the millers can do what they like without any check?—There is no check on them, and they can do what they like.

20. Do you find that the bush on the scenic reserves is fairly well preserved, or is it becoming infested with noxious weeds?—No. The only damage to the reserves is from fire, as the adjoining owners of land light fires, which spread to the reserves. All down the Buller people go along and put a match into the bush and burn acres of it, and do the same thing over again next year further on.

21. Can you suggest any means by which this can be prevented?—No. We have got the Engineer of Roads to instruct the surfacemen to keep a lookout for these people.

22. Has any case of the kind been sheeted home and proceedings instituted for damage?—Yes, one—between Westport and Inangahua Junction. It occurred eight or nine years ago. The guilty party was fined £3.

23. Do you find the deer becoming very numerous in this district?—Yes.

24. Will they be a menace to the orchards if allowed to go on increasing?—No doubt they will be.

25. Are they doing any damage to the native bush?—They have eaten the underscrub.

26. Have you noticed whether they are ring-barking the trees?—Certain classes of trees they do—the "five-finger" and karaka.

27. *Dr. Cockayne.*] Is the Buller Gorge reserved as a national park?—Part of it.

28. Are there notices put up explaining that no fires are permitted?—There were some put up on two or three different occasions, but all were pulled down.

29. Are there any notices there now?—Not that I am aware of. The last one was pulled down six weeks ago.

30. Would it be any use putting up notices now about burning, &c., in different places other than in the actual parks themselves? It would be a very good idea. Also as to shooting the protected birds.

31. *Mr. Murdoch.*] When a miller obtains an area for cutting, do you measure all the milling-timber on that block?—Yes, from 12 in. up.

32. You do not go lower?—Not below that, what we call millable timber. All the millable trees are marked and branded.

ALFRED JOHN WHITEHORN sworn and examined. (No. 34.)

1. *The Chairman.*] What is your position?—Government Ranger for the Nelson Land District. My district goes down nearly as far as the Inangahua district, from Reefton to Berlin, and as far as the mouth of the Maruia. I have been a Ranger since November, 1911, and prior to that date I was a chainman on the Government Survey staff and the Geological Survey. I have also had several years' experience as a farmer. I am the general inspector of the leaseholds and timber-cutting. I look after the sawmill and coal-outputs, the cutting of sleepers, &c.

2. What is the system here when a miller applies for an area of land?—The matter has never come before me, all the mills having been granted areas before my time.

3. What check is exercised over the output of timber to see the Crown receives its proper amount of royalty?—I go through their books and get the waybills from them.

4. Are the books kept well?—Apparently they are correct as far as I can see. Taking the big mills, I have never seen the butts of their books; they come to me as a lump sum. I inspect the books of Parata's mill.

5. Can you check their returns?—Only from the railway.

6. When do the millers supply these returns?—They make their payments every six months. I have sent in one return—last December—for the mills since being in Reefton. There are no mills cutting on Crown lands.

7. Supposing the miller has the right to cut off freehold land, and there is an area of Crown land in the vicinity on which he also has the right to cut, is there any method of checking what comes off the freehold, and also what comes off the Crown land?—That is the difficulty. My predecessor asked the Warden to stipulate that the miller should cut off only one area at a time.

8. Have you had any practice in the actual measurement of standing timber?—I can do it, but I have not had much experience.

9. How do you get the superficial contents?—I work on a formula I have in the office.

10. Do you think it would be advisable in all cases when inspecting the miller's books to also check by the railway measurement?—I would like a further check, and it would be better after seeing the miller's butts to also go through the railway-carriage notes.

11. Do you consider the dual control by the Warden and the Commissioner of Lands satisfactory?—I do not.

12. What would you suggest in its place?—To have one control only. The Warden might have to adjudicate on a case he had already acted on.

13. When a miller applies to a Warden for a timber-area does the latter refer it to the Commissioner to ascertain whether it is Crown land and open for milling?—Not as far as I know. One man has applied for a 50-acre block, and I have written to the Commissioner asking whether it was open for sawmilling purposes.

14. Are you supplied with maps showing what is Crown land and what land has been alienated?—We are supplied with the ordinary lithographs. They are hardly up to date, but I can tell from them which is Crown land. The boundaries might only be pencilled in and the actual survey not marked on the map.

15. What is the procedure as to the cutting of sleepers?—Most of the sleeper-cutters already have their twelve months' licenses, and only one man has got one since I have been at Reefton. He got it through the Warden's Court.

16. Does it apply to any specified area?—No. The fee is 5s., and it is a license to cut anywhere. It is issued under the regulations of the Land Act.

17. Then the Warden does not work under those regulations?—Yes, the Grey Warden, because he signed the license I referred to. The holder lives at Inangahua Junction.

18. After the man has got this rover's license does he pay royalty on the sleepers?—Yes, and it is collected when he brings them in. It amounts to 3d. per sleeper.

19. Supposing a sleeper-cutter came in with a quantity of sleepers to sell to the Railway Department, do they make him produce his license?—They are supposed to, according to the regulations.

20. What is your opinion with regard to the wisdom of allowing sleeper-cutters to roam all over the country cutting sleepers?—The policy does not work well in the interests of the Government, and there should be a better method adopted. I have no control over the cutting now. They might be given a license to cut in particular localities.

21. Have you formed an opinion as to the quantity of timber in your part of the district?—No. Any estimate I might form would be only approximate. I believe a return was sent in twelve months ago of the milling-timber, but it would be a very rough guess.

22. Who made it?—The previous Ranger at Westport.

23. What class of timber is general in your district?—Rimu. Very little kahikatea. There is birch also, and very small patches of totara.

24. Are not the birches milled out in that district?—Parata's have a standing order for birch, but other mills do not cut it.

25. Is there much timber used in connection with the mines?—Yes. It is cut by contract with the mine-owners, and no royalty is paid on it as far as I know.

26. Is the timber used by the mines sawn before it is used by them?—It is taken in the rough state. A return comes in for what is sawn, and the royalty is paid on that quantity.

27. *Mr. Murdoch.*] Do you think the dual control between the Warden and the Commissioner is a good one?—No, for the reasons I have stated.

28. *Dr. Cockayne.*] Do you know the yellow-pine?—The white-pine is called "yellow-pine" in some places. I have not seen in my district any yellow-pine.

29. *The Chairman.*] Supposing the men with roving licenses to cut sleepers were to cut posts and supply them to private individuals, is there any check to ensure the payment of the royalty?—A lot of posts have been supplied to the Public Works Department by private individuals, and they were cut without license. That has been the cause of my trip down the line to-day.

30. *Mr. Clarke.*] Then they can use their license for a double purpose, and you cannot detect them?—That is so. They should only be allowed to cut in defined and stated localities.

31. And perhaps large quantities may be sold to private individuals?—No doubt it is being done. There are thousands of posts about the roads on which I do not think royalty has been collected. I spoke to one man on the subject who got some off Crown land, and he quoted a clause in the Land Act permitting him to do it.

32. *Mr. Lethbridge.*] Have you any scenic reserves in your part of the district?—Little ones. There is one place at the Junction that should be reserved, but a lot of the existing ones are valueless. One place between the Junction and Three-channel Flat should be reserved.

33. Why are those you refer to no good?—They are spoilt from the scenic point of view, because the bush has been burnt off.

34. *Mr. Clarke.*] Are not they likely to regenerate themselves?—Not unless you plant the trees. If there is a good flat already burnt it is better to put it in grass than back into bush.

35. Do you attach no value to the scenic part of the matter?—Yes, when the scenery is there, and the beautiful native bush.

36. *Mr. Murdoch.*] Are the deer doing any damage to the native bush there?—I saw one head on the Inangahua recently, but I have had no complaints from the settlers. Up north I believe the farmers want to get rid of them. I have seen much damage done by them to the native forests in Nelson District.

37. Would they do much damage to the native forests if they were there in thousands?—No doubt they would. I have seen the undergrowth destroyed, the marks of their teeth on the scrub, and the trees half torn out of the ground and stripped. Once the deer have destroyed the scrub I have never seen it grow again, so that there would be little chance of the forest regenerating.

38. Are many goats here?—I have not seen many wild ones. There are some in the Maruia, but there are not many in the Nelson end.

BLENHEIM, SATURDAY, 29TH MARCH, 1913

WILLIAM HENRY SKINNER sworn and examined. (No. 35.)

1. *The Chairman.*] You are the Commissioner of Crown Lands and Chief Surveyor for the District of Marlborough?—Yes.

2. It has been represented to the Commission that in some districts the scenery reserves have been laid off in unsuitable places, that the timber has been destroyed, the reserves are becoming a breeding-ground for noxious weeds, and are also blocking settlement. Are there any places in this district to which that remark applies?—Not, generally speaking. The remarks may apply in a minor degree. There are only one or two small areas, as mentioned in our conversation this morning.

3. As to the one or two you mentioned, you will be able to forward a schedule later on showing the position and the reasons why they should be uplifted?—Yes.

4. In regard to climatic reserves: I notice your district has been fairly well attended to in that respect, but it would appear that in certain cases the advantages might be further extended?—I think so, especially in the Pelorus Valley and along the mountain backbone running south-west towards Tophouse.

5. It is not land that would be at all suitable for settlement?—Quite unsuitable—poor, rugged, barren country. A block in the upper part of Wakamarina Valley, adjoining the country in question and easy of access, has been open for selection for over two years, but no one appears willing to take it up. The timber on it is of little or no commercial value, consisting mainly of birch—no milling-timber in the ordinary sense.

6. In dealing with timber here what method is in vogue? Is it under the regulations of the Land Act, 1908?—Yes, that is on a royalty basis pure and simple. We have had no auctions here so far.

7. Do you not think the time has arrived now, in the interests of the Crown, that where an area is granted to a miller the timber should be carefully measured, the individual tres branded, and either put up to auction or tender with the upset price of the present royalty?—Certainly. That would be preferable to our present system, which is not, generally speaking, in the best interests of the Crown. There has been a great deal of waste in the past.

8. You think if a miller has to pay for every stick that the land will be much better cleaned up—which is, of course, to the interests of the Crown. You will be aware that that system has been in vogue in Auckland for a considerable time?—Yes. That is, in my opinion, the better system, and if any further timber-areas are dealt with in this district it will be by tender or auction as mentioned. Unfortunately there is very little timber left now to deal with.

9. In regard to the timber, you have no trouble with dual control in this respect?—No trouble at all. We administer the whole lot here.

10. Referring to these climatic reserves, I understand the deer are fairly numerous in this district?—Yes, they are fairly numerous in the Pelorus, and the Rai, and the upper portion of the Wairau Valley.

11. Do they live chiefly in the bush?—Mainly in the bush. Mr. Hursthouse will give fuller evidence than I can. We have had numerous complaints from the smaller settlers that they come out of the bush and damage the crops.

12. If they live in the bush they live on the herbage there?—Yes.

13. Do you not consider that with the large number of deer eating out the undergrowth in these climatic reserves it will tend to open the bush to the light and wind, dry up the moisture to a considerable extent, and thus pave the way for destruction by fires?—Yes, I think so, especially in our drier valleys. I have no evidence that I could put before you of any great damage done so far by the deer, but this must eventuate if the numbers increase. It must have a damaging effect as time goes on.

14. In your opinion the herds are increasing in number?—Yes.

15. Then, in regard to lands for afforestation, are there any lands in this district that you could recommend for plantation purposes? Of course, you will understand that for afforestation we can only deal with cheap lands that are not fit for settlement purposes, and of only small rental value?—I should say that very little Crown land of a suitable character is at present available for this purpose. As already stated, there is a block on the Altimarlock Run —pastoral lease—Awatere Valley, which I think would be suitable, and which would be available in five or six years on expiration of lease. This land is eight or ten miles up the Awatere from the Dumgree plantation, which you visited yesterday.

16. What is the nature of that land—broken land or paddock land?—Sloping land, broken as it rises in altitude. There is nothing left quite like that which you saw at Dumgree yesterday. On North Bank Settlement, Wairau Valley, there is good land for this purpose, but this is land for settlement and would require to be resumed.

17. Anything fit for land for settlement we could not look at, because the compound interest over long periods of years would swamp it. Do you know of any, Mr. Hursthouse?—Why not plant the waste lands in and along the Wairau River bed. There must be some thousand acres available there in different localities.

18. We find that to economically plant it can only be done in large areas. The administration of small areas—the necessary buildings and fencing—would make the cost excessive. If there are a thousand acres, would it be in one block?—Not in one block.

19. What are the private plantations here like, Mr. Skinner?—With regard to tree-cultivation on a large scale I would refer you to the plantations on the Hillersden Estate, Upper Wairau. Those plantations are doing remarkably well. Shelter-belts a mile and a mile and a half long and two or three chains wide have been successfully established, and go to show that dry country such as this is—both as to soil and atmosphere—will grow trees.

20. Do you not consider that it would pay the settlers in this district to do a great deal more than they are doing at present in the way of shelter-belts?—Most certainly. One great drawback has been the fact that if the settler improves his holding by planting his taxation is increased. Under the liberal terms of the Vogel-Atkinson scheme a great impetus was given to tree-planting, and if such were in operation now it would have a good effect.

21. It was suggested in Dunedin that land under plantation should be exempted from taxation. Do you agree with that suggestion?—I suggested such action before the Scenery Preservation Society in Taranaki some years ago. There is no doubt, however, that the tenants on the land for settlements in Flaxbourne, Starborough, Blind River, &c., are alive to the benefits of tree-planting. They cannot farm to advantage without it. The Wairau Valley was so windswept years ago that they could not grow grain. They can grow corn now, thanks mainly to the Hillersden plantations and others lower down the valley.

22. Do you think it would be a good thing if the Government had an expert forester to advise the people in regard to the kind of timber they should plant in these shelter-belts, with the idea that in the future they would provide a certain amount of timber for industrial purposes, butter-boxes, &c.?—I think that is an excellent idea. The trees could be supplied from the Crown nurseries at a most reasonable price. Often in these shelter-belts trees are put in of no use whatever for commercial purposes. The expert forester could advise those desirous of planting as to the most suitable trees.

23. *Mr. Adams.*] Have you noticed what particular trees the deer attack in those reserves?—Not the birches or the large trees, but the smaller luscious growth—the houhou and the broadleaf, and the karamu, and those plants or shrubs which constitute the undergrowth of the forest.

24. That seems to be the main consideration, whether they are trees of milling-timber or undershrubs?—Mostly shrubs.

25. You think they will not injure the forest-trees very much?—Of course, when the trees are very small they are nibbled off, but it is mainly the shrubs they are eating out now.

26. What is your opinion, Mr. Hursthouse?—The forest-trees perish with the rest.

27. *The Chairman.*] Is there not a danger, Mr. Skinner, that when the underscrub is devoured the sun gets in and dries up the leaves, and renders the forest liable to fire?—I am

not defending deer, but can hardly think they are so numerous as to be a serious menace to the bush. We had the same trouble in the Egmont National Park with the cattle. All sorts of remedies were suggested, unlicensed shooting amongst others, but now that settlement has advanced to the margin of the reserve the evil is curing itself. There, however, the forest recovers itself much more rapidly than in a dry district such as this, and the danger from fire need not be considered there.

28. Do you know how the estimates of timber in the report of 1909 were arrived at?—They were done by Mr. Stephenson Smith, the late Chief Surveyor, and Mr. Frank Ward, the late Crown Lands Ranger.

29. Is Mr. Ward here now?—He has retired from the service, and is in Nelson. Mr. Smith is here. The estimate of 1909, as regards private lands, I think was very much overestimated.

JOHN FAWCETT sworn and examined. (No. 36.)

1. *The Chairman.*] What is your position?—I am a builder and contractor.

2. Do you wish to make any statement or give any evidence in connection with our order of reference from the builders' point of view?—I am not quite prepared to make a statement at the present time. I would like to see other builders first and find out where they are getting their timber from. I think you have got the data as to the amount of available milling-timber in this district.

3. Have you a builders' association in this district?—No.

4. If the builders generally could arrange a meeting and reduce to writing the evidence they wish to put before the Commission, and forward the same to us later on, it would meet the case?—I think so. It is the only way to get valid evidence.

5. Where do you get your chief supply of timber from now?—From the Pelorus Valley. I have been getting some from the West Coast.

6. Through Picton?—No, round the coast and up the river—mostly rimu from the West Coast, and matai, rimu, and totara from the Sounds; but I think the timber in the Sounds is pretty well cut out. Our main supply is from the Rai Valley at present.

7. Do the builders here use the birches or beech-tree at all?—They use the birch if they can get it, but black-birch is very scarce, and brown-birch is not much to be had. Builders do not care about cutting it. If builders can get it they think it a satisfactory timber to use. Black-birch for piles and stringers is very difficult to get here, and builders have to fall back on ironbark and jarrah.

8. Are any of these timbers used for cabinetmaking purposes here?—None of the birches. Down in Greymouth there is some very excellent furniture being made from what they call the "red-birch": we call it "brown."

9. We find that red, brown, black, and white may refer to the same timber, and what they call "red" in one place may be "brown" birch in another: what is your opinion?—In the Onamalutu I used to get a good supply of red-birch, and it was so red it would take an expert to tell the difference between red-birch and totara.

10. Is there any *Pinus insignis* used here to your knowledge?—I have noticed a few trees milled, but it is only used for dray-bottoms. It seems to be light and tough for that purpose, but not suitable for the building trade. I bought some of those trees where you saw the row of poplar-stumps last night, and I built one or two sheds, and where kept off the ground—off the damp—that timber is as sound as possible, but I am using it mainly for fruit-boxes.

11. That is important evidence, because the poplar is a quick-growing tree. Do you consider it would be suitable for butter-boxes?—Certainly. There is no smell. It also makes very pretty furniture. Some of the boards I cut were about 14 in. wide. I made for a man a little clothes-box, oiled it, and it looked like birdseye-maple.

12. Is it an easily worked timber from the builders' point of view?—It is very soft, but very tough; no difficulty in nailing; does not split easily—good from that point of view—equal to if not better than white-pine.

13. Do you know the age of the poplar-trees in the avenue you mentioned when they were milled?—Yes, I can tell you to the year, because the man I made the box for—an old identity of Blenheim—asked me, when I was using some of the planks in connection with Levin and Co.'s new office, "What is that you are using, Fawcett? Is it poplar from that avenue of Mr. Neville's? I remember those being planted when they were the size of my finger. They were planted for a pig-fence about thirty-three years ago." I measured the trees felled on the ground, and they averaged about 97 ft. long.

14. And what was the mean girth, about?—The diameter would be about 2 ft., giving about 6 ft. of girth.

15. Would that be a butt measurement?—Yes.

16. And what measurement about 90 ft. up?—It would not be more than 20 in. girth from 90 ft., and 4 in. in diameter.

17. Four inches, you say, over 90 ft. That is useful evidence, as we are endeavouring to get the ratio of the growth of trees of various kinds?—I think it is a good average: thirty-three years old, and 6 ft. of a girth at the butt.

18. Is it fairly good land where they grew—shingle bottom?—No, river-bed silt; the very best soil. I think the poplar would grow on shingly soil. Whether it would be at the same rate of growth I do not know, because it is a tree the roots of which will find water, and it seems to grow quick and well enough. I had half a mind to send a few boards to the Government to see if they could not make use of them.

19. Have you any of the timber in stock now? Would you mind supplying the Commission with a small sample—say, a butter-box?—My timber is not quite wide enough. I have used all the wide stuff—6 by 1½ and 8 by 1½.

20. It need not necessarily be a butter-box. Could we have a cigar-box?—I would do that with pleasure.

21. *Mr. Adams.*] You say the black-birch is suitable for stringers, bridges, posts, &c. Can you suggest why the Australian timber is cutting it out?—It is a very valuable timber, and I am sure if it were put on the market it would be preferable to the Australian timber. I would use it myself, because I know it is a good timber. People will give you 7s. for a black-birch strainer at the present time, 7 ft. long and about 9 in. diameter.

22. How do you account for the Australian wood cutting it out in the way it is doing, according to your evidence?—Because the Australian timber has been placed on the market, and the black-birch has been left to rot here in the bush. Perhaps you get a nice fine tree with a 30 ft. barrel. You cut off a length of the 30 ft. at a bend, and the 7 ft. below is as hollow as a drum right through. I have seen it myself in the bush that way. It is a timber that takes a lot out of the soil. It is very heavy, and people will not take the trouble to place it on the market. If there were the same energy in placing black-birch on the market as there is over other timber I am sure it would hold its own against any timber from Australia.

23. How do you account for the fact that the other is placed more cheaply on the market? Evidently the Australian timber is hard to cut. In your experience is it quite as hard to cut as ours?—When you cut a tree of this Australian timber down you notice very little waste. In black-birch you cannot cut it without waste. You cannot rely on it: that is really the point. There are some beautiful black-birch trees in Karamea. In Marlborough they are not to be had, except on the high ranges, and it will not pay to get it.

HAROLD FRANKLIN HURSTHOUSE sworn and examined. (No. 37.)

1. *The Chairman.*] What is your position?—Crown Lands Ranger for Marlborough. I have been stationed in this district sixteen months, and prior to that in Nelson, at Westport, and also in North Auckland in the kauri forests. I have had six or seven years' experience as a Crown Lands Ranger, and I have also been Timber Ranger.

2. Were you a timber-measurer in the Auckland District, and did you work out the contents when putting the timber up for sale?—Yes.

3. In your opinion is the Auckland system a more satisfactory one for dealing with the timber than just selling it on a rough estimate, as obtains in some other districts?—Yes, I think so, particularly as regards the kauri timber. In fact, for timber generally I think that is a better method from the Crown's point of view.

4. The bush is worked in a thorough manner, and there is not so much waste?—I do not think there is so much waste. The majority of the sawmillers clean their bushes up in a practical manner. Of course, some waste more than others.

5. My experience has been in some districts the miller will run a tram through, and some trees nice and straight he will take, but others a little off the line in a gully he will pass over and push on to his next reserve, and so on. Those trees are apt to be left, and a fire runs through them?—That is so; but the matter rests with the Ranger. Before he can pass on his first area must be cleaned up to the Ranger's satisfaction.

6. Is not the tendency to run through, particularly if there are orders being filled for white-pine?—Theoretically the Ranger has power to make them clean up; but in cases where there is dual control it is a difficult matter, and with the shortness of timber I am of the opinion that if all the timber were measured it would be the more satisfactory way. Also, there is now many a sum of royalty that is not collected.

7. Do you think a man standing on a hill and looking over miles of country can form any reliable estimate of the amount of timber in a bush without thoroughly going through it and examining it carefully?—I am satisfied it is impossible to give anything like an estimate. Any estimate given in that manner is not worth the paper it is written on.

8. Have you noticed any deer in this district?—I have noticed signs of a great number, but very rarely see them.

9. They are shy, I suppose?—Very shy; but they appear to come out on the green clearings as soon as it is dark.

10. In the daytime they are mostly in the bush?—That I doubt. I do not think they go far in the bush, but keep along the edges in the cleared country.

11. What signs of them have you seen?—The bush being eaten and tramped. The tops of all the spurs in my district are more or less like a cowyard, the main ranges particularly. Everything is trampled out. I have often looked for signs of what they eat, because I had my doubts as to what they did eat. The major portion of this country has not much undergrowth. In the birch bush particularly you can see for 10 or 15 chains ahead of you nothing but a few young birch-trees and a fern I call the puhi.

12. Did you notice any shrubs in particular eaten?—Only the bush called the karamu; but I noticed the mosses eaten along the edges, and certain kinds of fern.

13. Have you noticed any of the larger trees barked by deer?—No; but I have seen them barked by goats, many of them.

14. How can you tell it is done by goats and not by deer?—I have seen the goats at it. They seem to bark anything.

15. Are the goats numerous in this district?—No, excepting in certain localities. They are wild goats: that is the trouble. In the forests where the goats are at all thick there is practically no undergrowth—the whole is eaten out—and the forest does not improve.

16. You think the goats had better be killed?—Yes.

17. What is your opinion, Mr. Skinner?—They are thick in places. In one portion of the district beyond where we were yesterday a Mr. Boyd has already killed five hundred goats. He said he could get no feed for his stock.

18. You recommend shooting them, Mr. Hursthouse?—I think the damage done by deer, goats, and cattle could be stopped by the rifle at any time.

19. It seems to be a question whether it would not pay the State, in view of the few sportsmen who are in the district or who come here from abroad, to keep our climatic reserves intact, rather than allow the deer to spread and damage them irretrievably?—Of course, I am not of the opinion that the deer are hurting our climatic reserves.

20. If they make tracks through the bush and eat the underscrub it will have a drying effect on the bush, rendering it more likely to be destroyed by fire?—Yes.

21. Do you not consider it would be a good plan to have certain parts of the country set apart as deer-parks or sanctuaries, and outside those places let the deer be shot at any time?—That seems a good plan. I have had cases mentioned to me of deer coming into crops and making a racecourse of them—not eating the crops. That was in the North Bank Settlement. They put in the night galloping round; not much of the crop left in the morning.

22. Have you had any instances under your notice of deer goring the draught horses?—Yes, in the Westport district and at Reefton—one case at each place.

23. Have you heard of any such cases, Mr. Skinner?—We had a complaint from Mr. Anderson, who had a fine draught horse killed in this district.

24. *Mr. Adams.*] What timbers in marking trees would you consider milling timbers, Mr. Hursthouse?—Rimu, matai, white-pine, totara. I have occasionally marked a miro where exceptionally good. Unless a tree contained 250 ft. I would not mark miro. The reason I would mark it is because probably he would take it whether I marked it or not.

William Norris Masefield sworn and examined. (No. 38.)

1. *The Chairman.*] Where do you live?—I am a sheep-farmer, living in Pelorus Sound. I have lived in the district about twenty years.

2. Are the deer fairly numerous where you live?—Not on my place, but quite near there are a number of red deer. They live chiefly in the bush, where they live on the leaves of the small trees. They also come out on the edge of the faces and feed on the grass.

3. Are they increasing?—Not very much. I have been deer-stalking for eight years, and have not noticed there are many more than there used to be. I have had more experience in the Wairau deer-stalking than down there.

4. Have you heard any complaints from the settlers of the deer damaging or destroying their fruit-trees and crops, or frightening or goring their horses?—I have heard once or twice—not locally, but more from the North Island—that they had to be shot off a bit, being too many; but they are not thick enough to have to do that here. I heard a farmer say a stag came among his cattle, but the big steers got hold of him and drove him away.

5. Will they not damage the climatic reserves and render them liable to fire?—I noticed at the "World's End," at Tennyson Inlet, on the Nelson boundary, they had got at the young trees, but in the Wairau there is just the birch, and they do no harm to the bush. They attack the small trees that do not grow large. They do not touch the pines, tawa, or pukatea.

6. Not even in their young state?—I have not noticed that. They eat one shiny-leaved tree that has a soft bark, but I do not know the name.

7. We have had evidence that the deer are doing much damage to orchards, one witness in Nelson complaining that five hundred trees had been so destroyed?—In my district the settlers would soon settle them if they got into an orchard; but they are not thick enough there.

8. Do you not think if certain areas of bush country were set aside as deer-parks—where they could be shot at certain seasons—and outside those areas they could be shot at any time, the sportsman's case would be met?—Yes. I suppose that would thin them out in the parts where you do not want them.

9. The president of the acclimatization society in Dunedin gave evidence and seemed prepared to fall in with that view. If treated in that way the interests of sportsmen and tourists might be conserved, and stop this damage being done to private individuals' properties?—They have destroyed a lot of crops, but not near us. They are not thick enough there and cannot get to us, as our property is on a narrow peninsula, and the water stops them.

10. *Mr. Adams.*] Do you know of many sportsmen coming from outside New Zealand to the district you know of best?—I do not think there are many. Some come to the Wairau deer-stalking, but I think most go to Otago and Wairarapa.

11. How many do you think have been here?—I only know of a few of my own friends.

12. Then the amount brought into the country by way of the licenses is of no great value?—I understand that you assess the damage done by the deer at a greater value than the income that may be brought into the country by encouraging sportsmen to come here. In my opinion, however, they do not do any great damage.

NAPIER, THURSDAY, 3RD APRIL, 1913.

ROBERT THOMAS SADD sworn and examined. (No. 39.)

1. *The Chairman.*] You are the Commissioner of Crown Lands and Chief Surveyor for the District of Hawke's Bay?—Yes.

2. This is not a very extensive timber district?—No; most of the timber lies a long distance back, some thirty to thirty-five miles.

3. Is there any sawmilling in operation at present?—There are five mills at work, partly on private and partly on Crown land: one at Norsewood, with about twelve months' cutting supply; Anderson and Sons', eight miles from Dannevirke, with about two years' cutting on Crown lands. At Puketitiri there are two mills cutting on private land, with about eight or nine years' cutting, chiefly rimu, thirty-five miles from here by traction-engine, but in winter timber-wagons only are used—a two days' trip. Bull Bros. have a mill at Tepuhuhi, on private land, with five or six years' cutting. There is another small mill near the same place. The Ranger, Mr. Brooks, has reported on the timber-areas, and I will forward a copy of his report. As to the area at Matawai and Motu, there have been efforts made to get it thrown open for settlement. The milling-timber is worth from £10 to £12 an acre, but it is deemed advisable to withhold the area until the railway gets closer. The rimu there is supposed to be some of the finest ever seen.

4. Is there any danger from fire if left in its present state?—It has escaped the recent fires when all the country was on fire, so that there seems to be no risk.

5. *Mr. Adams.*] Is there any estimate as to how long the present supply will last at the present rate of milling?—No; it might last ten years, but it would depend on the demand. It could be cut out in five years.

6. *Dr. Cockayne.*] Do you know the beeches by their scientific name?—I think the one referred to in the report is what they call "brown-birch."

7. *The Chairman.*] Has the *Pinus insignis* been used in this district for building?—A great deal is grown on the runs, but I do not know of any which has been cut up and sold for building; or gums either.

8. Are there any large private plantations in the Hawke's Bay Land District?—I think there are none over 50 acres. There are shelter-belts at Hastings, some of which would be thirty years old; but, of course, I am only a recent arrival here.

9. *Mr. Murdoch.*] There seem to be some decent trees on the Park at Hastings. Do you know their age?—They would probably be forty years old.

10. *The Chairman.*] Do you consider it advisable that the land on the northern shore of Lake Waikaremoana should be acquired and reserved for scenery purposes?—I do. It is a very important matter. It is Native land, and is situated in the Auckland Land District. If the forest there is not shortly acquired it will be destroyed along the face of the lake, the value of the lake will be affected, and the forest-area we have reserved on the other side of the lake will also be rendered worthless. Only recently another 100 acres has been burnt. The lake is looked on as a most important source for the development of electrical energy.

11. *Mr. Lethbridge.*] Do you think that taking the forest off the hills will diminish the rainfall?—Tremendously. Taking the south-west wind in the Nelson District, that wind becomes a dry wind after it passes the Hope Saddle.

12. *The Chairman.*] Is the caretaker at Lake Waikaremoana a Government employee?—He leases the place and boats from the Government, and is the Ranger for the trout-fishing.

13. Do you think he should be appointed Ranger for the scenery as well?—I certainly think so, and have recommended accordingly. He should have power to arrest offenders.

14. Are there any large areas of inferior land in this district belonging to the Crown that you could recommend as suitable for planting?—There are two large blocks at Kuripapango, on the road to Taupo, about seventy miles from Hastings.

15. *Mr. Lethbridge.*] Any chance of getting a railway there?—Not the slightest; but one could be put into it.

16. *The Chairman.*] Have you any more accessible?—The Kaiwhaka Block, worth from £1 to £1 10s. an acre. The value of the other I would estimate at £1 an acre.

17. *Mr. Adams.*] Which block would you expect the trees to grow the best on?—I think they would grow equally well on either block. The first block is 15,710 acres, and the second 14,000 acres. Then there is the Timahanga Block, of 17,000 acres, which is suitable.

18. *The Chairman.*] Have you had any complaints from settlers that the scenic reserves have been allowed to become breeding-places for weeds and rabbits, or have been laid off in unsuitable places?—I do not remember any; they generally only make those complaints when they want to obtain the lands so reserved.

19. *Mr. Lethbridge.*] Then you have had some?—In the Nelson District, but not here.

20. *The Chairman.*] Do you know if the deer are numerous in this district?—Yes, out in the blocks near the Omahi Saddle. I saw two red deer near the track.

21. *Dr. Cockayne.*] Do the sheep-farmers like them?—I do not think they trouble the farms to any extent. They are more troublesome to the cattle-farmers in the rutting-season, when they knock the cattle about. The red deer are spreading very fast in the forest reserve around Lake Waikaremoana. They are eating out the young growth, and no doubt thereby rendering the bush more liable to fire. It also induces campers to go into the bush to stalk the deer.

22. *Mr. Lethbridge.*] Do they shoot in the bush?—Yes. No doubt the deer are a great nuisance in those places and should be exterminated.

23. *Mr. Clarke.*] Are there any areas belonging to the Crown nearer than those you have indicated that could be acquired for planting purposes?—You would not get anything nearer than Kaiwhaka of a reasonable value. That block is Crown land, and not very valuable. It would run a sheep to the acre when broken in.

24. Is there any land in private hands that could be bought for the purpose, say, at from £1 to £1 10s. per acre?—I do not think so.

25. *Mr. Lethbridge.*] What about at Rissington?—You would not get it much cheaper there now. I know nothing so easily accessible as the Kaiwhaka Block.

26. *Mr. Adams.*] What is the difference in the elevation of these blocks?—Kaiwhaka is lower than the other one.

27. *The Chairman.*] What is the position with regard to the wind-swept areas in this district? —I would suggest that the Department might perhaps send an officer to examine them and report whether something could not be done in the way of planting shelter-belts to prevent the wind blowing the pumice and soil away. I am sure the marram-grass would take in these places.

28. *Dr. Cockayne.*] What is the nature of the soil?—Pumice. It blows all over the country and fertilizes other parts, but the places affected are denuded of soil.

29. Is there much of it?—One place is at Glen Ross, 350 acres, on land that ought to be carrying a sheep and a half to the acre, and the tops of the ranges. It would be best to deal with a piece of Crown land, which could be made an object-lesson to private owners. There is Crown land at Glen Ross where the experiment could be tried. I think the area of the "blown" country is increasing.

30. *The Chairman.*] Is there any other bush that ought to be reserved?—There is a patch near Te Puhuhu on Native land—Donnelly's bush—between 2,000 and 3,000 acres. It is the nearest bit of bush to Napier, and ought to be preserved. There is also another piece of bush on the road to Taupo of 300 or 400 acres. It is on the eastern portion of the Kaiwhaka Block; it should be taken as a scenic reserve.

31. *Dr. Cockayne.*] Are there any gullies in these patches of forest which could be preserved as samples of the flora if the surrounding land were cut up?—Yes. A lot of streams in that district are now dry as the result of the stripping of the bush; formerly they were full of water.

JOHN GRIFFIN sworn and examined. (No. 40.)

1. *The Chairman.*] You represent the Napier Builders' Association?—I am the president of the Hawke's Bay Builders' and Contractors' Industrial Union of Employers. Mr. Ward attends with me. As to the timber industry in this district, I may say that our local present supplies are principally derived from Pohui, Patoka, and Puketitiri districts. Besides these mills supplies also come from the Main Trunk line. The present high cost of timber is regulated by the difficulty of hauling from the inland mills, through want of railway service, the timber having to be brought in by traction-engine and horse teams at a cost of about 6s. per hundred feet, independent of 9d. per hundred road-tax charged by the County Council. The supply from the inland districts is good for years to come. The question of the conservation of timber, especially in the inland districts, is rather a difficult one to deal with. A large part of the bush lands is held in small holdings, and where not in a position to be milled commercially the timber is felled and destroyed by fire. It is perhaps opening up a large question to propose a way to get over this matter. In many cases the land is held under lease, in some instances freehold, but there is no doubt that some scheme should be formulated, either by repurchase of the land or bringing a law to bear, to prevent the awful waste of first-class building-timber. There are blocks of Native land carrying large quantities of bush which could be dealt with as indicated here. To give one example, it may be stated that on the Ohurakura Block, near Te Pohui, which skirts the main Napier Road, and is about thirty miles out, there is a block of about 3,000 to 3,500 acres of excellent bush suitable for milling. There are also large blocks of bush country through the Upper Mohaka, Ngatapa, and Te Haroto districts. As to future supplies of timber, we think the Government should acquire land suitable for planting on the route of the proposed Napier-Wairoa Railway. Nearer at hand, running through Hawke's Bay, are extensive river-flats where no doubt certain classes of timber could be grown to advantage.

2. Can either of you gentlemen tell the Commission how much timber is imported here?—

3. *Mr. Ward:* We can buy almost from anybody in the larger towns where they deal directly with the merchants, and the latter with the sawmillers; so that we cannot say what the imports are. We buy in Napier and do not import ourselves. The timber-merchants seem to know nothing about the meeting of this Commission, and one man told me they had received no intimation. I should have thought he could have given valuable information. He is a builder, sawmill-owner, and timber-merchant. I have been sawmilling for the last eighteen months at Puketitiri, but the rates of haulage put me out of court. There is plenty of bush there, and with proper cartage facilities the price of timber in Hawke's Bay would come down, because now the Main Trunk line regulates the price by reason of the cost it puts us to in obtaining timber from the inland bush. The men cutting the timber could tell a great deal better than the Lands Department what the bush is producing.

4. *The Chairman.*] Do you know, Mr. Ward, whether *Pinus insignis* has been milled in this district for building purposes, or gums?—In an experience of thirty-seven years I have not known of any. *Pinus insignis* has been cut for fencing, but the blue-gum is not suitable for building, being of too quick growth, and it splits to pieces.

5. Have you any knowledge of any private lands that could be acquired for tree-planting in Hawke's Bay?—I have not considered the question.

6. Do you agree that this district should be planted for future use?—No doubt it should. It should be made compulsory that when land is cut up so-much of the barren spots should be

planted. Or the Government should take the initiative in the matter. They are acquiring large blocks of land which are not fit for grazing, but would do for tree-planting. These portions could be conserved for afforestation purposes without much loss to the Government.

7. I suppose that as builders you recognize that your supplies in this district are very limited?—Up to within fifty miles from Napier on the inland road from twenty to twenty-five years' supply is all there is in sight with the present demand. If the demand increases it would be cut out under that time.

HENRY MARTIN SMITH sworn and examined. (No. 41.)

1. *The Chairman.*] You are the Crown Lands Ranger, Hawke's Bay?—Yes, and an authorized surveyor. I have been acquainted with this district constantly since 1889.

2. Is there much timber land at the Gisborne end?—A considerable area, but I have not been there for ten years. There is another Ranger there; I meet him at Mohaka. There has been a vast quantity of timber cut in the Motu district, and also destroyed by fire.

3. Do you know the Waikaremoana district?—Yes.

4. What class of bush is there?—Plenty of rimu and birch, but not very much totara.

5. Is the bush there of a kind that is liable to fire?—I do not think so, if ordinary care is taken. I laid off a road to the accommodation-house twelve years ago, and the bush was accidentally fired on one occasion by the fuse used for blasting.

6. Are there any deer running through the forests there?—Yes; moose and red deer. I have not been there for some years.

7. When you were there were the deer living in the bush or in the open?—In the bush; but there were not many. It is within the last ten years that they have increased.

8. *Dr. Cockayne.*] Are the moose increasing?—I cannot say.

9. Do they live in the bush too?—Yes; it is a scrubby sort of bush, and they are occasionally found on the outskirts; they would eat the undergrowth.

10. If they increased rapidly and kept on eating out the undergrowth do you not think the bush would be rendered more liable to fire?—I do not think so. I have had experience lately in respect to plantations which have been fenced in and the stock kept out, with the result that one or two have fired; whereas if the sheep had been allowed in in the spring they would have eaten down the grass and prevented the fire getting a hold. I do not say that cattle should be allowed in the plantations, but sheep do more good than harm.

11. If the underscrub is eaten out the grass will come on, but if there is any growth the grass will not come on: is not that so?—That is so; but in the case of an accidental fire, if the stock have been prevented having access to the plantation the same thing I speak of would occur—the grass would come on and the fire would have something to take hold of.

12. Supposing there were no grass in the forest would the danger from fire be increased?—Probably it would be increased if the underscrub were gone.

13. The under-planting and the scrub is the part which assists the forest to hold water and keep it in the soil. Supposing the scrub is removed by deer, would not there be a greater chance of the bush losing its water-holding power than if the scrub were there?—I do not think so. In the case of a forest reserve here on the ranges, some twenty years ago a huge fire swept over hundreds of acres, and had it not been for the underscrub the fire would not have gone as far as it did. Having once got a hold the whole area was destroyed, whereas had there been cattle in the bush to eat down the underscrub I doubt if the fire would have gone so far.

14. What about the question of the holding-capacity of the soil as regards water being lessened by the removal of the scrub?—It probably would be lessened.

15. *Mr. Murdoch.*] Supposing in the case of birch forests the old trees were dying out, and the deer had free play to roam where they liked and eat the trees and undergrowth, would the forest be able to regenerate itself again?—Under those circumstances regeneration might be prevented; but the great trouble in Hawke's Bay has been through the settlers firing their land and so damaging the forests adjoining.

16. *Mr. Adams.*] Do you know what shrubs the deer eat?—I do not.

17. *Mr. Sadd:* They will eat any shrubs the cattle will eat.

18. *The Chairman.*] Do you know any scenic reserve in this district, Mr. Smith, as to which the settlers have complained that they are unsuitable for the purpose and are becoming breeding-grounds for weeds and rabbits?—I do not know of any complaints from settlers in that respect.

19. *Dr. Cockayne.*] Does any shooting take place in the scenic reserves?—Not that I am aware of; but possibly in the case of the reserve near Waipukurau, which should be in charge of a caretaker, shooting does go on.

20. *The Chairman.*] Have you reported on the estimated quantities of timber in the bush in this district?—Yes, and the position of the mills.

21. What method do you adopt in estimating the timber?—I have taken an acre or two of what I considered was a fair average area, have noted the number of trees in that area, and made my report on that basis.

22. Would you take the measurement of these trees to work out the quantities?—I estimate the height.

23. What formula do you use for calculating the contents?—One-quarter the girth squared, multiplied by the length. I use the Hopper's measure.

24. You know the return for 1909 as to the forest areas of New Zealand, and the number of feet of milling-timber: do you consider those figures anywhere correct?—No; they are very approximate indeed.

25. You would not think it reasonable for a man to go to the top of a hill overlooking miles of country, and from there be able to decide how many feet of rimu, miro, kahikatea, and tawa there were in that bush?—Certainly not; it must be only extremely approximate. As a case in point, take the estimate of the Motou timber: there was no comparison between the ideas of the officers sent to estimate that.

26. Is that on record?—Yes, in Wellington.

27. *Dr. Cockayne.*] Does the Department give the officers a reasonable time to estimate the timber in these areas?—I think so, unless the estimate is wanted urgently, when the officer has to do the best he can. I think, as a rule, he is given ample time to do the work. When a man has to go into the bush his only plan is to count the trees, but if he is where he can overlook the whole area he can form a fair idea of what is in it.

28. Supposing an estimate was wanted of the timber in the East Cape Peninsula, how long would the Department give their officer to do it?—If the matter were urgent the officer has to do the best he can, and probably he would only look over the tops of the hills. But if they wanted an expert report I think they would be quite prepared to give a reasonable time to do it.

29. Could a man over a piece of land like that do the work under several months?—In several weeks.

30. Could he do it at all?—Yes, if properly equipped with a party and tents. Sawmillers seem able to get a good idea of what is in the bush the first time they go through it before tendering for the same, and might consider the time another man would take to do the work wasted.

31. *Mr. Adams.*] Do you think these estimates are under or over the mark?—I have always been inclined to err on the lesser side. Several officers were appointed to estimate the timber in the Motu bush, and they differed from one another from 15,000 ft. to 20,000 ft. to an acre.

32. Can you recall one case where the bush has been underestimated and afterwards cut out and the true quantity ascertained?—The Motu bush has been altered every year by cutting, and by private or Crown lands being further opened up. I do not think I can answer your question.

DARGAVILLE, TUESDAY, 15TH APRIL, 1913.

FRANCIS JOSEPH DARGAVILLE sworn and examined. (No. 42.)

1. *The Chairman.*] You are the Mayor of Dargaville?—Yes.

2. What point do you wish to bring before us?—I wish to refer to the question of the Waipoua Forest, regarding which a section of the community has endeavoured to induce the Government to keep it as a kauri-timber reserve. Speaking from experience, the idea of saving a kauri forest from destruction by fire has in almost all cases proved futile, as the kauri-tree is easily fired. Such a forest is not necessarily set on fire by the scrub in the immediate vicinity, but a spark from a distant blaze very often ignites a kauri-tree at its top, and soon the whole bush takes fire. Another point about the Waipoua Forest that has to be considered is that the bush there is spread over a considerable area of country which is admirably suited for settlement, enjoying an excellent climate, with soil of fair quality, and I am certain that if that area were opened for selection it would be eagerly sought after. I would therefore suggest that the Waipoua Forest should be offered for sale, and that the proceeds be utilized for the purpose of acquiring a forest belonging to Mr. Trounson, and which you will see to-morrow on the road to Waipoua. It is an isolated block, and more easily conserved from fire than any other block of timber in the district. It is also easy of access to a main road, and would be very handy to the proposed extension of the Kaihu Railway at Donnelly's Crossing. Mr. Trounson's area is from 300 to 500 acres. The Waipoua Forest is spread over about 23,000 acres, and this seems a large block of land to lock up for that purpose. The Government would be doing the right thing in disposing of the timber and thereby allowing the land to be utilized for settlement. Mr. Trounson's block adjoins the Kauri Park.

3. Has all the land adjoining the Waipoua Reserve been cut up for settlement?—Some of it is not yet in occupation, but the Prime Minister assured me the other day that the balance would be made available immediately for settlement. But Mr. Maxwell (caretaker, Waipoua Forest) will be able to give you more accurate information as to what sections are settled.

4. *Mr. Maxwell:* It is nearly all occupied, but there would be other sections available if the timber were sold.

5. *The Chairman.*] Is there any other matter you wish to mention, Mr. Dargaville?—As to the question of the export of white-pine, speaking as a settler, and not on behalf of the sawmilling industry, I may say that the kahikatea in this district is within measurable distance of being cut out, and we ought to consider the advisability of preventing its exportation, seeing it is required for a special purpose.

6. Is the kahikatea here growing by itself or is it mixed with other timber?—In some cases it is the sole timber, but on the higher ground it is mixed bush. On the flats there is little kahikatea.

7. In some districts it has been represented that where that timber is mixed with other classes of timber if the kahikatea is not worked it is liable to be wasted through destruction by fire. Do you agree with that view?—That event might occur in the case of the drier country.

8. Where it is growing as a bush solely it is generally on very rich land, and the question arises as to whether it would pay the State to keep that land in standing bush or to put it into grass which would produce butter-fat. Do you care to express an opinion on that point?—It is a matter that requires careful consideration, but personally I am of opinion that the grass would pay this country better.

9. Have you made any experiments in this district in the way of utilizing other timbers, such as tawa or taraire for butter-boxes?—None have been made to my knowledge. The kahikatea has always been so handy, and the time has not yet arrived when we have to think of providing other timbers. Taraire is being utilized for furniture, and it goes to Sydney for that purpose.

10. *Mr. Murdoch.*] Do you know of a bush from which the kauri has been removed and the rimu, leaving other timbers growing, and where fire has not run through?—No. It is difficult to find a bush in this district where fire has not gone through.

11. In that case the bush is done for?—Yes; fire follows the bushman and the settler.

12. *Mr. Clarke.*] And there is no timber available in those old burnt areas?—No, with the exception of the small timber that a few years ago would not be cut. Now they are cutting the "rickers," because they have become valuable.

13. Your main reason for wishing to dispose of the Waipoua Forest is the inability to protect it from fire?—Yes.

14. Later on you suggested the bush should be sold, and the proceeds applied to the purchase of another bush, which you reckoned could be saved from the fire?—Oh, no; but more easily saved. I do not know of any kauri forest that could be saved from fire, but Mr. Trounson's bush could be better protected than the Waipoua Reserve.

15. Do you not think there would be as much danger in the case of Mr. Trounson's forest, seeing that it faces the main road, and will be near the proposed railway?—I think not, for the reason that the road is there and also a lot of open country. It is not so liable to fire, being a small area, as one of over 20,000 acres, with much high fern and grass country surrounding it. Settlement is approaching Waipoua all the time, and the danger arises from the settler who is burning off his land, from whence fire may spread quite accidentally to the reserve. Or it might be set fire to by a gum-digger.

16. Do you recognize that your argument would absolutely preclude the saving of any bush?—To a greater degree as regards Waipoua, and to a lesser degree as regards Mr. Trounson's bush.

17. Why sell one reserve to buy another in its place in the same district?—It is less liable to be burnt than Waipoua.

18. Supposing the Waipoua Forest were opened for sale, what do you think would become of the timber itself?—You are getting on tender ground now. Opinions are divided as to where the timber would go. There would be great competition for the timber, and the State would get a very good price for it, but as to where it should or would go I do not profess to know, as I am not an expert.

19. *Mr. Lethbridge.*] What is the rainfall in the Waipoua Forest?—I do not know.

20. Well, it is so much that it is said that it is impossible almost to burn it?—I have been there on several occasions, and only once met with rain.

21. *The Chairman.*] Is there any other matter you wish to speak about?—With regard to afforestation generally, I am a member of the Hobson County Council, and that Council has now approved of a suggestion to plant all its reserves. In each county there are a large number of reserves fit for nothing, and bringing in no revenue, and we intend to plant them with utility trees, which will also assist the climatic conditions. The Government should encourage and assist local bodies and private individuals in this direction. My Council is going to put its planting scheme in hand this winter. We intend to plant some pines as shelter-belts, and useful trees inside.

WILLIAM THOMAS HUNT sworn and examined. (No. 43.)

1. *The Chairman.*] What matter do you wish to refer to?—I am a farmer, and a member of the Otamatea County Council, and wish to mention the matter of the block of 4,500 acres at Ruawai. It consists mostly of kahikatea, and was known as Butler's timber-cutting right. The Crown set aside Section 4, Block II, of 74 acres, as a reserve, but the timber having been cleared out of the adjoining block this small reserve is gradually decaying, and in a short time the timber will disappear. It is good land for settlement. I would suggest that the reservation be lifted, and the area be exchanged for portions of Sections 1A and 2 of Block XII, Tokatoka Survey District. Kauri-trees are growing on the hilly land in the sections I suggest for exchange, and there is no other bush within a hundred miles of the piece on those sections.

2. *Mr. Lethbridge.*] You think the Government should sell the present reserve?—Yes, and put the reserve I suggest in place of it.

3. *The Chairman.*] Are there not timber-rights over the portion you now want reserved?—Yes, and we suggest that the Crown should buy the timber thereon from the Butler people.

4. Has any estimate been made of the quantity of timber involved?—Yes, all the kauri has been estimated, and 6d. royalty is being paid for it.

5. *Mr. Lethbridge.*] Would it be worth while putting a tram into it?—I think so; but in 100 acres you would not get more than twenty-five kauri-trees. I cannot give an estimate now of the quantity of timber there.

PETER BROWN sworn and examined. (No. 44.)

1. *The Chairman.*] What is your occupation?—I am a settler residing at Waimata, about seven miles from here. I wish to refer to the question of the Waipoua Forest. I agree with Mr. Dargaville that it would be wise to dispose of the timber there, and open the land up for dairy farms, as the latter are a better asset to the community than timber, which is liable to be destroyed by fire at any time.

2. Have you been through that forest recently?—No.

3. At any time?—Yes, all over it.

4. Were you residing there then?—Yes.

5. What was the climate like in those days?—There was a great deal more rain than now, but as the bush has been cleared we have less rain.

6. That being so, do you not think if all the bush were cleared off it would be a bad thing for the district?—No. We are in a swampy country, not hilly, and I do not think we shall ever be short of rain. But I do not want all the bush to go all the same.

7. When you resided in the bush were there any fires?—A few odd trees were burnt.

8. Before Waipoua was declared a State forest was it pretty well run over by gum-diggers?—Yes.

9. Therefore if it were liable to burn it stood a very good chance of being burnt then?—I suppose so, but a kauri bush is apt to be burnt at any time by a man lighting his pipe.

10. On account of the rainfall do you not think that even if a fire did start it would probably go out?—I do not think so. Once a fire starts in a kauri-tree it runs to the top and will spread thence to another tree half a mile away, and so on, even if there is not plenty of fuel on the ground.

11. *Mr. Clarke.*] Has any one a right to start a fire in that forest?—No, but a man might drop a match after lighting his pipe.

12. But I understand that there are no regular roads to or through Waipoua Forest?—Not that I know of.

13. Then what purpose would a man go there for?—Some go pig-hunting and cattle-hunting.

14. I suppose such people know they run the risk of imprisonment if they start fires there?—It would not be done on purpose. The Ranger cannot be everywhere, although he is as good a man as you can get.

JOHN H. MCCARROLL sworn and examined. (No. 45.)

1. *The Chairman.*] What do you wish to state?—I am a settler, but have had twenty-five years' experience as a forester and sawmiller. I wish to support Mr. Hunt in his application regarding the reserve at Ruawai. The present reserve should be sold and parts of the others he mentions taken up for scenery-preservation purposes, as there is not another piece of bush nearer than a hundred miles. I am not pessimistic enough to say that no kauri can be saved: it can be. As to the Waipoua State Forest, I strongly oppose its being opened up, both for sentimental and commercial reasons. We have there a forest that can never be replaced, as a kauri-tree cannot be grown in a hundred generations. As to the talk about fire, I say it is impossible to burn that forest even if you tried after a dry season like the present, on account of the wet vegetation there is in the bush. It would pay the Government to expend a larger sum than at present in protecting the Waipoua Forest from the risk of destruction, as it is a wonderful national asset. To-day the poor man cannot buy kauri timber, but wealthy private individuals are allowed to export it from the country, realizing large profits thereby. If Waipoua is sold our own people should have the benefit of the timber, and on that ground I would hold the present reserve.

2. Have you been over this forest personally?—I know it all.

3. What is the quality of the land there from a settlement point of view?—No good at all, on account of its abnormal rainfall. It is too poor to grow anything once the kauri is removed. In the immediate vicinity of that bush and towards the coast the country is nothing but gum land and fern hills.

4. Do you know the Marlborough Settlement?—I know it well.

5. How are the settlers doing there?—I rode through that settlement seven years ago and every house had the shutters up, and the settlers had deserted it with the exception of one man. I understand that since I was there it has been taken up again, and fresh people are tackling it.

6. Since when?—Within the last two years. They have had a good summer and good burns.

7. Do you agree that if this forest were thrown open a lot of land would be available for settlement?—I contend that the Government would be committing a sin if they allowed that forest to be destroyed. There are different fern-growths there that you do not get in any other New Zealand forest. The only place which is doing any good is Kaitaia, a considerable distance in from the Waipoua Forest.

8. Have you any evidence to give the Commission with regard to the proposed stoppage of the export of white-pine?—The day has arrived when the Government ought to seriously consider whether the white-pine should be sold for export, because that tree is becoming so scarce. I admit you cannot interfere with the private individual, but the Government should sell no more of its white-pine for exportation.

9. But if the Government said none of it could be exported, what about the position of the private individual then?—It would hit some people very hard, perhaps myself included; but, speaking generally, I think the time has come when the prohibition of the white-pine export ought to be seriously considered. The dairying industry is growing rapidly, and what are we going to do when we cannot get butter-boxes?

10. What do you think they do in Canada and Siberia?—I cannot say.

11. *Mr. Murdoch.*] Have you any other timber that will answer the purpose?—I cannot tell you. We have no tawa here in any quantity that would pay to mill.

12. What about taraire?—Yes, but not in millable quantities.

13. *The Chairman.*] Do you wish to state any other point?—With regard to reafforestation, speaking from practical experience I found that when I grew *Pinus insignis* close together I got a millable tree, while if grown apart the tree was worth nothing.

14. Have you had any experience in milling *Pinus insignis*?—No. I have seen it milled, and it turned out very well. I planted them twenty-five years ago, and they are now 3 ft. in diameter and fit to mill. I planted them on very poor gum country. I will forward measurements.

15. Have you planted gums?—No; only *Pinus insignis*, Norway pine, pitch-pine, and *macrocarpa*. I have come to the conclusion that the closer together you plant the cleaner the trunk will be; the tree will shed its branches, and the sun will draw it up into a straight, clean stick.

EDWIN HARDING sworn and examined. (No. 46.)

1. *The Chairman.*] I understand you wish to tender evidence regarding the question we are inquiring into?—Yes. I am a farmer residing in this district, and I wish to urge the desirability of adopting a better method of selection or location of the forest reserves, and as to the class of country to be reserved. Many of the areas which have been set apart for climatic and other reserves have been well adapted for settlement; on the other hand, a good deal of country has been opened for selection which is of no commercial value, but is distinctly adapted for reservation purposes. Hilltops have been opened in this district and in Hawke's Bay for selection which, when the forest has been removed, have proved worthless; while in other places, such as portions of the Pekehekarau State Forest Reserve, and near Puhipuhi, where reserves have been set apart, it has been impossible to prevent fires. Thus the Dominion loses the value that it sought to obtain by making these reserves. Sections on the Tangihua Range, near Tangiteroria—almost bare rock, or with a certain light forest growth—might be set apart with advantage as climatic reserves.

2. Are those sections in the hands of the Crown?—Some are, but others have been in the hands of settlers for some years. They have applied in one or two cases to be allowed to surrender a portion of their leases which contained land useless for pastoral purposes, but nothing has been done.

3. *Mr. Clarke.*] Then they would not have any forest reserve?—The forest is already there, and should be reserved from the climatic point of view. While a member of the Hobson County Council we made repeated application to the Land Board and the Minister for the removal of reservations on the lower-lying hills, and to have reserved in their place similar areas, or even larger ones, on the mountain-tops. Again nothing was done. I would even suggest that the mountain-tops, where they are in private hands, should be purchased and reserved, or exchanged for available pastoral lands lower down; or the latter could be sold.

4. *The Chairman.*] If the Government wanted to purchase land on mountain-tops might not an enhanced value be put on the same?—Yes; but would there not be a still greater commercial value in the case of the lower lands released from reservation?

5. I am not speaking of the intrinsic value, but rather of the chance the owner would have to impose an enormous price on the Crown when he knew the land was wanted for scenic or climatic purposes?—Then I would be in favour of taking the land compulsorily.

6. *Mr. Murdoch.*] I presume there are portions of the Tangihua Range still in the hands of the Crown?—A portion belonging to the Omana Block—known as Wangimatangi—we repeatedly asked should be reserved, as it had no value from a settlement point of view, before that block reached its present high commercial value.

7. *Mr. Clarke.*] Do you suggest that trees should only be planted in situations where the land is absolutely valueless for settlement?—I am talking of land which is covered with virgin forest, and absolutely safe from fire. For climatic purposes some of the reserves have been made in the wrong places and in localities prone to fire; also in districts which would have been better settled.

8. *Mr. Lethbridge.*] You suggest a comprehensive scheme of exchange in connection with all such areas?—I do—holding what is in the hands of the Crown where the areas are suitable for reserves, purchasing the hilltops where required, and selling the lower levels now held as reserves and where the same are fit for settlement.

9. *The Chairman.*] Do you know the Waipoua Forest?—Yes, very well. I have had a lifelong experience of that class of country, and taking into consideration what has occurred in this district, the Bay of Islands, and in the Whangarei district, I am distinctly of opinion that it is impossible to preserve that forest from fire.

10. *Mr. Lethbridge.*] Do you know the rainfall?—Not accurately.

11. We are told that it is very high?—That is so; but in such districts there occasionally comes a period of drought, when fires will occur and spread. There is no class of country more inflammable than a kauri bush. Every credit must be given to those responsible for protecting this forest in the past, but the time will come when a huge fire will occur, with the result that, as at Puhipuhi, many thousand feet of most valuable timber will be lost to the Dominion. At Kaihu there is the Kauri Park, and a considerable expense was incurred in preserving that place from fire by cutting the scrub and clearing the ground round the park from grass; but only a few years ago a fire travelled across the country for some distance and destroyed the most striking portion of the park—the big kauri-tree. As to the commercial value of the Waipoua Forest, myself and others feel that it would be a permanent injury to the district if an enormous asset—

estimated at £250,000 worth of timber—were withheld from the market, with its consequent employment of labour; and also if from 25,000 to 40,000 acres of land, capable on the average of carrying from two to two sheep and a half to the acre, were to be permanently reserved from settlement.

12. Mr. McCarroll forms a different estimate of the value of the soil in that forest?—I can only give my own opinion. We have a very successful cheese-factory within a few miles of Waipoua; there is a successful district on the northern side, and we are drawing cream from the eastern side. I have been through the district, and there is not sufficient difference in the quality of the soil to justify me in saying that any large portion of it would be of less value than the land on an average sheep-run.

13. We have been told that the settlers have been starved out of one settlement to the north of Waipoua, and that only lately have others gone in to try and make a living?—I refer to Waimamuku, which is closer to the coast.

14. Do you know the Auckland Settlement, and the result in that case?—Those settlers took up the land in small areas when the road was not passable; but I consider the land there is distinctly superior to that in the Marlborough Settlement, and the settlers there are making a success of dairying on country which was thought nearly impossible for such a purpose years ago. It is on the eastern side of Waipoua. Dairying is not a success, I admit, on the Marlborough Settlement.

15. How many settlers in the Auckland Settlement are supplying cream now?—I think less than twelve. I do not think any of the higher country is now used for dairying, but the quality of the soil has been proved to be such that it can be used as dairying country. Visitors wishing to see kauri-trees can see some of the finest specimens in existence at Kauri Park, and adjoining that area there is a good kauri bush belonging to Mr. Trounson which, if acquired, would justify the State in maintaining it as a kauri exhibit.

16. *Mr. Clarke.*] Why buy Mr. Trounson's bush when we have one of equal or greater value in the hands of the Crown already?—For the reason that the other is inaccessible.

17. *The Chairman.*] Is there any other point you wish to mention?—I wish to suggest the reafforestation of some of our northern lands, which are lying unproductive. We contribute our revenue to the Forestry Branch of the Department and get nothing in return.

18. *Mr. Lethbridge.*] Are you not getting one-half back for your roads?—No, because in the case of a forest reserve on Government land no timber is being cut. We have been told that in the case of royalties derived from State forests from which the reservations have been lifted the money is earmarked by law for reafforestation; so the north gets practically nothing now, although for the first year after the Royalties Act was passed we did get something where the reservations had been removed.

19. Has nothing been done at Puhipuhi?—Very little. There are considerable areas on the west coast here which would grow good trees, and which are fairly safe from fire. They are gum reserves on Crown land.

20. *The Chairman.*] That is the point. We know we can grow the timber, but can we preserve it from fire?—They are doing it at Rotorua.

21. Have you any views on the question of prohibiting the export of white-pine?—There is a general point in that connection which should be considered. Considerable areas of kahikatea have been purchased at a value estimated on the export demand, and large areas are being held by the present owners because of the export value. The question is therefore whether there would not be an injustice done those who have purchased it on the strength of the price obtained for this timber for export purposes if its further exportation is prohibited. That is all I wish to say.

WOOLSEY ALLEN sworn and examined. (No. 47.)

1. *The Chairman.*] What is your occupation?—I am a sawmiller, residing at Dargaville. I do not think the exportation of white-pine should be stopped for a considerable time. The Government should, however, set apart certain areas to meet future requirements, but the exportation should not be blocked for many years to come.

2. *Mr. Lethbridge.*] Is there a good deal here?—It is mixed with other timbers, and there is a large quantity left still. Some people want the land cleared as soon as possible, and now you cannot acquire timber-rights for more than two or three years at the outside. If the Government block the export these people will fell and burn the kahikatea, and nobody will benefit. Now the settlers are making money out of the royalty, and slowly getting their farms into order. New Zealand timber-merchants now only use the very best of the white-pine, while the Australian market takes anything—from 2 ft. by ¾ in. upwards, second- or third-class material that we in New Zealand will not look at. I can sell anything from 2 ft. in length and upwards.

3. *Mr. Murdoch.*] What proportion of butter-box sizes do you get in kahikatea?—65 per cent. Australia will take all the 6 in. by 1 in. it can get for lining, and the rest goes into butter-boxes.

JAMES MAXWELL sworn and examined. (No. 48.)

1. *The Chairman.*] You are the caretaker of the Waipoua Forest?—Yes. I have been twelve years in the district, and six years caretaker. I know the Waipoua Block thoroughly. The kauri throughout the area of 23,000 acres is scattered in clumps, with very little on the eastern side.

2. What kind of timber is growing there?—Rimu, miro, taraire, kahikatea, and a little totara.

3. Is the soil fit for dairying supposing the bush was removed?—Certainly, outside the kauri area. Where the kauri is growing some of the soil is fair, but as you know kauri absorbs all the good in the soil.

4. From your experience do you consider the Waipoua climate very wet?—Yes, it is very wet.

5. Is there much danger of that bush being burnt if it caught fire accidentally?—There is no danger of its being burnt so long as some vandal does not set fire to it in very dry weather.

6. Have you known of a fire being started there and going out?—I have seen a fern-fire started more than once and run up, because I have done it myself. In the winter-time, when the wind is blowing from the forest, we sometimes burn a bad bit of fern, as it is the most suitable time to burn. But it is risky even then, and I am extremely careful.

7. Whenever a fire of that kind has been started it has gone out again?—Certainly.

8. *Mr. Murdoch.*] You are quite conscious of the fact that if the fire had got into the bush it would have gone through the bush?—The bush would burn to a certain extent; but the gum-diggers had carte blanche for twenty-five years to try their level best to burn some of it, and they did burn a little, but very little. When these men were camped in the bush they lit fires at the bottom of some of the trees, but only a little of the tree was burnt. The fire never ran through the forest.

9. *The Chairman.*] Are there any settlers living round and about that reserve?—There are none in the immediate vicinity of the kauri forest. The Auckland Settlement adjoins the reserve.

10. How long is it since you were there?—I think, six years ago. I do not know the condition of the settlement now. I could send you a report on it, because I do not think the Crown Lands Ranger has been there lately.

WHANGAREI, MONDAY, 21ST APRIL, 1913.

LIONEL HANLON sworn and examined. (No. 49.)

1. *The Chairman.*] What do you wish to say?—I have been asked to wait on the Commission by the Fruitgrowers' Association here, which has recently asked the Minister of Agriculture to select and plant suitable areas of land in the vicinity of Whangarei for the supply of timber for fruit-cases for the near future. Some years ago fruit-cases cost us 4s. 6d. a dozen, then they went to 5s. 3d., and this month the price has been again raised to 7s. 6d. a dozen. I refer to bushel cases. Native timbers are used—in fact, anything. Apples are sold at 2s. 6d. a case.

2. Have you known of *Pinus insignis* being milled here for cases?—No; but at Port Albert that timber is being used for cases, while at the Tasman Settlement, Nelson, *Pinus insignis* is being planted for the same purpose.

3. *Dr. Cockayne.*] Are the settlers at Port Albert milling the *Pinus insignis* themselves?—No; I think they take it to the local mill. I heard of one settler who planted 5 acres recently for fruit-cases on the same soil he is growing fruit on.

4. *Mr. Clarke.*] Have you used that timber here?—No. A number of *Pinus insignis* trees forty years old were cut down in the town here recently, but the mill would not take them away, as they deemed them worthless. There are many thousands of acres here that would grow *Pinus insignis* well; also apples.

5. *The Chairman.*] Private or Crown land?—Mixed.

6. In the event of the Government entertaining the idea of making a plantation here, at what price could the land be obtained?—Close to the town the value would be considerable.

7. Could they get it for £1 an acre?—Yes, and less. A little out of the way it could be got for from 10s. to £1.

8. *Mr. Murdoch.*] Could a block of 10,000 acres be obtained?—I could not say. Plenty of gum reserves that are nearly worked out could be got.

9. *The Chairman.*] We can only recommend plantations on large areas?—Gums do not kill out the fern for many years, but *Pinus insignis* does it in a few years, and nothing I know of has a better chance here than the *Pinus insignis*.

10. Have you had any experience of the poplar as a fire-resister?—I have not seen a poplar burning, and cannot say whether a belt of that tree would check a fire. The Lombardy poplar does not do well on poor land. The aspen poplar has been taken up locally for cabinetmaking by Harrison and Sons. Some trees at Mairtown are 3 ft. in diameter.

11. *Mr. Murdoch.*] Was fern the cause of the Puhipuhi plantation catching fire?—Yes.

12. *Mr. Clarke.*] Were any precautions taken to guard it?—No.

13. *The Chairman.*] If tea-tree were burnt off and *Pinus insignis* seed sown broadcast, would the latter beat the tea-tree?—I believe *Pinus insignis* would. At Parahaki, near here, you can observe the *Pinus insignis* coming up through the tea-tree.

14. *Mr. Lethbridge.*] Are there many imported birds here?—Thrushes. The blackbird is dying out. I do not think the latter are to be feared, because Waiotapu simply swarms with blackbirds, and still the *Pinus insignus* is increasing rapidly there. They do not kill the seedlings.

15. *Dr. Cockayne.*] Do you use your fruit-cases over and over again?—Only once.

16. Consequently the quantity required is very much increased?—Yes. We have to look out for disease, and there is difficulty in getting them back again.

18. *The Chairman.*] Have you had any experience of taraire as a timber?—Boards of that timber have recently been used in the erection of a factory here in defiance of the by-laws, and it seems a remarkably hard timber with good lasting qualities. You can see the place. I have seen large quantities of it in the bushes close here, while hundreds of acres have been burnt a few miles out from Whangarei. You can see the remains of the trees—50 ft. to 60 ft. high, without a branch, and from 12 in. to 24 in. in diameter. The country there is of a similar class to that in the Nelson District, and, like that land, grows the finest apples.

AUCKLAND, THURSDAY, 24TH APRIL, 1913.

DAVID GOLDIE sworn and examined. (No. 50.)

1. *The Chairman.*] You are a timber-merchant in business in Auckland?—Yes.

2. One subject we have to inquire into is as to whether or not, in view of the increasing demand for white-pine timber in this country, its exportation should be prohibited. We should be very glad to hear your views and those of the other Auckland timber-merchants regarding this question?—It is a great mistake to continue shipping white-pine in planks to the English market, where it is used for piano-cases. I have refused to supply it for that purpose, as it discredits the timber of New Zealand generally; but I was informed that a cheap case was wanted, and the people concerned did not care whether it lasted or not. For that purpose I should certainly put an export duty on that timber. As to butter-boxes, the question turns on the supply and demand. The Lands Department could better supply that information.

3. The white-pine grows on swamp land of the best quality very often for dairying, and the question arises whether it would pay the country better to keep that land in timber or use it for dairying purposes. What is your opinion?—The matter depends entirely on whether the swamp land can be properly drained, and its situation generally.

4. Have you had any experience in using *Pinus insignis* timber?—Two mills here have used that timber for boxmaking, and some of it went to Rarotonga, where it was condemned.

5. That timber perhaps was not grown under forestry conditions?—No, simply for shelter. It was full of knots. Macklow Bros. and the Waitemata Milling Company were the firms that used it. They did so when they had no other logs, but I refused to buy any of it.

6. Have you had any experience as to the cost of building in wood and in brickwork or ferro-concrete?—No. Kauri is not used very much in building now. Rimu and matai are used, but on account of the inferior timber used present-day buildings are not very much more costly than in olden times. Timber grown on pumice soil is not as good as that grown in the north. Totara, for instance, grown on pumice land is not as heavy as that grown in the north.

7. The life of a building erected now is not as long as the life of one constructed twenty years ago?—No, especially if it is built by jerry-builders. There are buildings which have been erected fifty years, and the timber seems as good as the day it was put in. In those days kauri was cheap, and good timber was used—not the cheap stuff they are using now.

8. *Mr. Clarke.*] What are your views as to the question of the future timber-supply for the Dominion?—I think the Department could furnish you with reliable information on that point better than I could. Building is increasing, and the supply is becoming smaller. In the King-country from forty to fifty million feet has been cut in recent years by a few mills.

9. Do you find it more difficult to obtain supplies than you did formerly?—Yes. Royalty in the case of kauri is now 4s. and 5s. per 100 ft., when formerly it used to be only 6d. Then we have to pay much higher wages, and do not get an equivalent amount of work.

10. We are told that forests which have already been milled are now being gone over again, and trees that at one time were rejected as unfit for the saw are now being cut up and supplied as marketable timber. Is that correct?—Quite true. The mills are now taking it all out, when before it was rejected, kauri especially.

11. Do you think the Government are in general getting sufficient payment throughout the Dominion for the standing timber?—As far as the north is concerned they are getting the full value—every tree has to be paid for; but in the south the same system is not followed. There the Government are not getting the value, and the system is unfair to us. We pay for timber that it does not pay us to take out, and the Government gets it.

12. Do you not think that our supplies are not as great as they are commonly supposed to be?—They will not last as long as it is thought.

13. *Mr. Murdoch.*] Do you not think some method could be adopted to check the waste that goes on in connection with our bushes?—The kauri you cannot possibly save, because that tree is easily killed. Smoke will almost kill it, while the tapping for the gum destroys the trees wholesale. In some cases gum-diggers are allowed to tap the trees to prevent their setting fire to the forest, and in a dry season like the present there is an ever-constant danger of a bush-fire spreading and destroying thousands of pounds' worth of kauri.

14. What effect has tapping on a tree?—We never like it tapped unless we are going to cut it within three years.

15. Does tapping cause any injury to the wood?—It is like taking the life-blood from a man, and the timber is not nearly as good, to my mind.

16. *Dr. Cockayne.*] Have you had any experience as to the lasting-powers of timber which has been tapped and of timber which has not been tapped?—When cutting it up I thought the tapped kauri seemed very much softer and spongier.

17. *Mr. Murdoch.*] You have found great difficulty in saving a kauri bush from fire?—You cannot save it unless it is a large area and you have plenty of men on watch; then there is great difficulty. You can save any other timber but kauri.

18. *The Chairman.*] Is there any other point you wish to mention?—I suggest that you should consider the advisability of growing wattle, which forms capital wood for staves for butter-barrels. It grows rapidly, fire does not affect it, and it is used in Australia for the purpose I mention. Black-wattle is the one to grow.

19. *Mr. Clarke.*] Do you not think some of the gum lands could be profitably utilized for planting for future requirements?—The only trouble is as to the time it will take to grow the trees. Any tree to be of any value will take a long time to mature. You might try the Tasmanian gums. We use the peppermint-gum for shingles, and the stringy-bark for flooring and joists. These gums might do better in the south on account of the climatic conditions there corresponding to those in Tasmania, but they might be tried up here also.

20. What is your opinion with regard to planting these gum lands with pines of a commercial value?—It would depend on the price of labour. If you utilized prison labour it might work out all right, but with free labour at its present price it would never pay. You could import your timber very much cheaper.

21. But supposing other countries are in the same predicament as ourselves, and have no timber to spare for us to import, what then?—That will not be in your time or in mine. There is plenty of timber in Siberia, and it is being imported into Melbourne now. Vast forests are being opened up there, while in the Pacific islands there is good timber. I submit you will be able to import timber very much cheaper than you can produce it here, and you only need to grow forests for climatic reasons.

22. I suppose you know that not only here but in other parts of the world, including Siberia, the estimated timber-supplies are very much in doubt?—We have no difficulty in getting timber, and foreign agents are continually pressing us for orders.

23. What about the future? Do you not think it would be a wise policy to be prepared with local supplies, so as not to have to depend on countries we might go to war with?—If you are going to pay two and three times the value of the timber it would not be worth producing it here.

William Arthur Cumming sworn and examined. (No. 51.)

1. *The Chairman.*] I believe you are the president of the Auckland Branch of the Institute of Architects?—Yes.

2. Could you tell the Commission the comparative price of building, say, a six-roomed house in timber and in permanent materials such as brick, stone, or ferro-concrete?—The better reply would be that the price to-day in brickwork would be about from 19 to 20 per cent. more than it would be in timber, taking the question on broad lines without regard to any special-sized house.

3. How would the price in ferro-concrete compare with that in brickwork?—The difference would be comparatively trifling in the case of a small job, as the amount of labour involved in fixing up the false-work is inconsiderable.

4. I suppose the timber used in that case would be inferior?—It is not necessary that it should be of a durable nature for false-work, and *Pinus insignis* lends itself extremely well to such a purpose.

5. Can timber used for false-work in the case of a concrete building be used over again?—There is always a tremendous lot of waste on account of the odd lengths required for the frames and moulds, and only a very small percentage may be used again.

6. In the event of the price of timber going still higher, of course the margin between the price of the building in wood and the one in permanent materials would lessen until it would be cheaper to build in permanent materials than in wood?—Providing there is no corresponding sympathetic rise in the cost of the permanent materials, such as brick, lime, and cement.

7. Do you think it is probable there will be such a sympathetic rise?—One can only speak from the experience of the past. Bricks have gone up considerably in price of late years. I may say that this inquiry has caught me quite unprepared, and if you will formulate questions as to the information you require we will call a meeting of the Institute and be only too pleased to supply the particulars the Commission wants.

8. *Mr. Murdoch.*] Do you think the time is fast approaching when the present supply of timber here will run out?—I think the day is very far distant. There are so many uses in connection with a building to which timber can be applied, and the other methods, such as steel for sashes and frames, becomes very expensive. Such material may be suitable in a building like the Post-office here, where cost is of very little importance, but private individuals would find it beyond their reach.

9. *Mr. Clarke.*] Does it not appear rather absurd to talk of getting substitutes when we can get the original itself?—It is acknowledged all over the world that the timber-supply is getting less, but it would seem that the energy and ingenuity of man would be capable of designing some means of meeting the demand. At present there is a material on the market which when it is used looks like timber, and it is used for lining. Nothing, however, can replace, as far as the structure is concerned, the timber in a wooden building.

10. Are you aware that, notwithstanding the supposed substitutes and other things being used in place of wood, in reality the actual consumption *per capita* is increasing throughout the civilized world?—I have heard so.

11. Can you refer us to any official data on the question?—No; I have seen it in a magazine.

12. *Dr. Cockayne.*] Is timber being used to a greater or lesser extent for building purposes than it was twenty years ago?—Taking Auckland, the consumption of timber in the city is considerably less per head on account of the brick area. Buildings in that area have to be replaced in brick.

13. *Mr. Clarke.*] But the buildings that are being pulled down now are being replaced by others ten times as big?—Yes, and the building that would take ten times as much wood as the present one it is replacing would also accommodate ten times as many people.

14. *The Chairman.*] Do you wish to add anything?—I only wish to say, on the question of tree-planting, that if it is decided to introduce an extensive scheme of planting the locality planted should be as near the market as possible, and the question of the temperature and climatic conditions under which the trees should be raised should be carefully studied, in order that good, durable timber can be produced. My reason for urging the latter consideration particularly is that an oak, which I am informed was planted in Government House grounds here

fifty-five years ago, was cut down fifteen years since and sawn into planks, and the timber was allowed to season. I got a small piece to make a memento of the occasion, but it was more like working up a piece of sappy cork than oak. I made a small frame of it, but within four years' time it was completely riddled with worm, and I threw it away. Therefore the question of climate should be carefully watched. Some of the Scotch fir that grows in Norway and Sweden, and also in England, is very inferior in quality when cut into timber.

15. *Mr. Adams.*] Are you sure that the oak you refer to was British oak?—Well, it seemed like American oak. I do not think it was English oak.

16. *Dr. Cockayne.*] Do you think it would be advisable to have made an accurate examination of our latest plantations to ascertain what relationship their wood bears to the wood of similar trees when grown in their native country?—I am sure the information would be very valuable.

17. With regard to growing timber close to the market, have you thought of the question of the price of the land required, and how that factor would bear on the ultimate cost of the timber, reckoning over the cycle of years involved the compound interest on the rental value of the land?—That would have to be considered. It might cost you more than the freight required to bring that timber into the country from some place where land is cheaper, but occasionally there should be an opportunity, all things being equal, of selecting some cheap land near the probable market. It might pay the State to acquire land at a higher figure for the sake of obtaining the necessary suitable climatic conditions under which to grow the trees. You must consider that factor in selecting the site.

WILLIAM BROCK LEYLAND sworn and examined. (No. 52.)

1. *The Chairman.*] You are a member of the firm of Leyland and O'Brien, sawmillers?—Yes, but we have not had a special meeting of sawmillers as to this question. I might mention that I was a member of the Timber Commission, and during that inquiry we had it in evidence that, whereas in the United States substitutes for timber were used more largely than in any other country in the world, the consumption of timber *per capita* had, over a period of twenty years, increased 94 per cent. as against an increase in the population of only 50 per cent.

2. Would not the increase respecting timber be largely accounted for by the demand for timber for paper-pulp?—I think not, because the bulk of the latter comes from Canada.

3. Do you think the time has arrived when, through timber getting too high in price, other materials will be substituted, and thus automatically obivate the demand for timber?—The price of timber is regulated by the cost of its production and placing on the market, plus royalties.

4. If the cost of timber goes higher and higher do you not think more building would be done in other permanent materials?—In the case of buildings finished in permanent materials, such as ferro-concrete, a lot of timber is used and afterwards wasted. More timber has been used in constructing our ferro-concrete wharves than was used in the wooden wharves. It is low-grade timber that is used.

5. Timber which can be grown cheaply?—Yes, not necessarily of a durable material.

6. *Dr. Cockayne.*] Is it possible that in the future there will be a greater demand for second- and third-class timber than in the past?—Yes. I do not think the demand for high-grade timber will decrease, but it will fluctuate according to the volume of trade and the money-market. As to the area where timber should be planted, at one time we looked to Te Kuiti for a large supply of timber. A large population has sprung up there, and timber will be required for the local population, and so I see no objection to planting in that district. By the time it grows the population will be there to use it. On the other hand, the importation of timber should be encouraged in view of the timber-famine that is inevitable in this country. I should allow the people living near the coast to use the imported timbers, while the inland population could take advantage of the supplies locally grown inland. Thus the transit problem will become a vanishing quantity. It is quite immaterial where it is planted so long as there is the supply.

7. *The Chairman.*] Do you think the export of white-pine should be prohibited in view of the demand for it here for butter-boxes?—I do not think I can speak with authority on that question, as we do not export timber.

8. Is there any other matter you wish to mention?—As to kauri, when the Government offer a bush for sale a time-limit is imposed in which the timber must be removed, and if an extension of time is required the miller has to pay 5 per cent. on the capital value for such extension. I suggest that a longer period should be granted, and the conditions as to holding the timber minimized. This would be in the interests of timber-conservation, as under the present system the miller is forced to cut it sooner than he requires to.

9. *Mr. Lethbridge.*] Would not that be in the interests of the large sawmiller as against the small man?—Possibly; but the smaller man cannot buy this timber in small lots, and we have to look at the general effect on forest-conservation and the timber-supply.

10. Supposing the United States prohibited the exportation of timber, where should we be if we have not enough local supplies?—We should be thrown back on Canada if they would give it to us, but they have increased the price.

11. *Mr. Clarke.*] That means that we must plant?—Yes, and if we are to conserve our own timber we must also import. I speak as a fairly large holder of New Zealand timbers. If you do not import you raise the value of timber we are holding. Timber rises in value as supplies get scarcer.

12. *Mr. Murdoch.*] Your contention is that in other countries timber is getting scarcer every day?—Yes, and some countries are getting very jealous of their reserve supplies, and not inclined to let them go out.

13. *Mr. Lethbridge.*] What is your opinion of the Waipoua Forest?—It would be a good thing to preserve it, but can we? Mr. Mueller, late Commissioner here, stated that wherever civilization approached the kauri it was doomed. In every case, in spite of Government protection, it has gone, as at Puhipuhi.

14. *Dr. Cockayne.*] Do you know that the gum-digger has been operating in the vicinity of Waipoua for the last thirty years?—I know that as the result of advancing civilization lots of fires have occurred. There is a great risk of fire in the case of that forest.

15. *The Chairman.*] Have you considered the value of taraire as a milling-timber?—I am glad you mentioned it. It grows very rapidly. Eighteen years ago I planted a taraire for ornamental purposes, and it now measures 38 in. in girth. The taraire will grow anywhere, and it is a very useful tree.

16. *Mr. Lethbridge.*] Do you know that all over the north the frost has killed a lot of taraire?—No.

17. *Mr. Murdoch.*] In your experience do you find any difference in the quality of timber in a kauri-tree which has been tapped for gum?—I do not know from my own experience, but other sawmillers have told me that it deteriorates a tree to bleed it, but they do not mind that if they are going to cut it down soon. If it is to remain as an asset they will not allow it to be tapped.

David Alexander Hay sworn and examined. (No. 53.)

1. *The Chairman.*] Your occupation?—I am a nurseryman.

2. Have you grown exotic trees in connection with your business?—Yes.

3. Have you planted any of them out under forest conditions?—Not very many. I have only supplied them.

4. Do you consider the poplar a good fire-resister if planted in belts?—It would be a good fire-resister when planted close together like a row I saw in Blenheim. I recommend as a fire-resister in this northern part the *Phytolacca dioica*, a native of Central America. It is almost impossible to burn it

5. *Dr. Cockayne.*] But will it stand frost?—I am afraid not.

6. *The Chairman.*] Is it a valuable tree for commercial purposes as regards timber?—I think not, because it grows very rapidly, and the wood is soft. It grows to about 50 ft. high.

7. Have you ever taken any measurements of the growth of the *Pinus insignis?*—No. It is considered a fast grower on forest land. I think it would grow on the poor gum land, and could be grown by scattering the seed broadcast after burning off the manuka if you disced it in to save it from the birds.

8. *Mr. Murdoch.*] Could you name any trees that would make good milling-timber in the shortest possible rotation?—I believe in the eucalypti, which would be good timber-trees for New Zealand if carefully selected. *Gunnii* is one of the best, and *Cryptomeria japonica* would be valuable for the northern part; it has made with me 9 ft. of growth in two years.

9. If planted under forest conditions would *Pinus insignis* be a useful timber to grow?—I think so, but the great danger is fire. With the gums you will not have so much trouble in that respect, for if the fire goes through them it does not kill the trees. All varieties of Japanese trees succeed very well in the northern part here. Japanese larch is being planted.

10. *Mr. Adams.*] Did you hear Mr. Cumming speak of an oak in the Government House grounds here?—Yes, but I do not think it could have been the English oak.

11. *Mr. Murdoch.*] Have you seen any large trees of *Cryptomeria japonica?*—One about 50 ft. high, but with no bulk of timber in it. If close planted they would form good stems.

August Charles Koch sworn and examined. (No. 54.)

1. *The Chairman.*] You are the District Engineer of the Railways Department?—Yes.

2. We would like to get an opinion from you as to the experience of the Railway Department in regard to the powellizing process for railway-sleepers?—I have had very little experience respecting the matter. We had a few hundred sleepers on the line here that were powellized, and they were not satisfactory—white-pine and rimu. After being twenty months in the track they were examined, and out of 200 white-pine sleepers 7 per cent. were found to be bad, and out of 100 rimu 3 per cent. were found to be decayed. After being two years and eight months in the track, fifty white-pine sleepers were examined and 62 per cent. were found to be bad, and 40 per cent. were found to be bad in the case of a further lot of 192 white-pine sleepers. 149 rimu sleepers, after being two years eight months in the track, were examined, and 22 per cent. were found to be bad. The proprietors of the process stated that there was something defective in the treatment.

3. Is your Department still having sleepers treated by the powellizing works?—I could not say.

4. What timber is being used now in your work?—Mostly imported ironbark for bridge-work. We use jarrah sleepers.

5. Has *Robinia* been tried for sleepers in New Zealand?—Not that I am aware of.

6. Is the Department using ferro-concrete for bridges?—They are using steel for railway-bridges. We use ferro-concrete in some cases.

7. How does the cost of steel compare with wood for bridge-work?—Steel costs more, but it has a longer life, and in the end should prove cheaper.

8. Is the consumption of sleepers a growing one in this district?—We are using more than we did ten years ago, but the last five years the average has been about the same.

9. *Mr. Murdoch.*] In your opinion, would white-pine ever make a satisfactory sleeper?—Some of the creosoted ones have been very satisfactory.

10. With powellizing?—I do not know. It depends whether the process is satisfactory or not. Creosoted sleepers have proved very satisfactory, but they have been in the line only some thirteen years.

11. Have any larch sleepers been tried?—I could not say.

11A. *Mr. Adams.*] Is there any reason why maire sleepers should not be used?—I think the Department will take maire sleepers in time if they can get them. There are, however, a lot of borer-holes in maire, and that would not be satisfactory, as the holes are where the dogs go in.

12. It was represented to us that many sleepers were rejected by the Government for very small defects. Is that so?—Possibly they had worm-holes where they wanted to put the dogs in.

13. *Dr. Cockayne.*] Do the powellized sleepers decay?—Our experience with the few we had on the line was that they were decaying.

14. Did you find the creosoted ones decay?—No; they are very satisfactory. There were creosoting-works at Woodville ten years ago.

15. What does creosoting cost per sleeper?—A creosoted sleeper costs 3s. 6d., delivered, but I cannot tell you what the creosoting costs.

HENRY PAUL KAVANAGH sworn and examined. (No. 55.)

1. *The Chairman.*] I understand that you were connected for many years with the Timber Branch of the Lands Department?—Yes, for four years. I am now a retired Civil servant.

2. Do you wish to make any statement?—In all cases I think it is a shame to fell really valuable milling-timber to provide land for settlement purposes. In the Wairarapa district, which was the finest milling-area I have ever seen, mills were erected, after the country was in grass, to cut up a few odd logs here and there, so scarce was timber. I am strongly of opinion that any milling-country that contains 7,000 ft. to the acre, if it is easy of access, should be reserved for timber purposes, and not burnt to provide land for settlement. In all cases where the land contains 10,000 ft. to the acre, no matter how remote it may be, the surveyors should be instructed to report on the quantity and quality of the timber with a view to reserving the bush. The land is of more value to the settler—by £2 an acre—if the heavy trees are reserved. He has not to fell them.

3. In that case would the land be thrown open for settlement immediately the bush is cut?—Yes, if the adjoining bushes are not interfered with, otherwise a fire would be fatal when standing bush in the neighbourhood is being cleared. In the case of fire the Government should provide grass-seed, and see that it is sown as soon as the country is burnt. My plan would mean that good milling-timber would be taken out before the land was opened for settlement, and consequently the value of that timber would be saved to the State.

4. Do you think the time has arrived when the Government, in disposing of timber, should have the trees measured and the contents computed before disposing of milling-areas?—If the timber is worth 1s. a hundred feet, or more, the trees are worth measuring. Then the sawmiller can have no complaint, because if he says he has not got his quantity the number of each tree can be ascertained from the schedule. I was Crown Lands Ranger in the Wairarapa, and was sent to Auckland to take charge of the kauri forests, and I initiated the system of measuring I now advocate should be enforced in all districts. The practice then was not to take any notice of undersized trees, but that was altered, and now such trees have to be paid for. Prior to that time the timber was sold mostly on an estimate, and the kahikatea and other good milling-timbers were not calculated in the schedule—only kauri—so they got those for nothing. At one time the Crown would sell a clump of bush, but there were no boundaries; as soon as I came here the areas were laid out according to the creeks, a line being cut round each boundary. All sections and boundaries were distinctly shown, and it was not possible for the miller to go over his boundary. If he did the other man would soon stop him.

5. In measuring trees here do they use the Hopper's measurement?—They use a "ready reckoner," possibly a Hopper's. It is quite different to the railway measurement, which generally indicates a great deal less timber than is sold to a company by the Government. Of course, the millers say it does not pay to put second-class timber on the railway-truck, and so we are losing a lot of valuable timber which would be suitable for many purposes. I would not use sap of rimu for any durable work; it is fit only for packing-cases. When the Government set aside milling-areas they should make provision for a road reserve between those areas and the railway, otherwise the millers are blocked in getting the timber. So with creeks; 1 chain wide on each side of a river should be reserved to give access for the purpose of floating timber down the creeks. I know of cases where settlers have planted orchards to obstruct the access to the creeks and rivers, and then have claimed heavy damages in case of a fresh, when the timber has done no harm to their holdings at all in floating down the creek. In one case a man claimed £968 from a timber company for damages done by their logs to his fences, and finally he took £19.

6. Have you any suggestion as to how to obviate these matters in the case of private lands?—I am now only referring to reservations of standing timber before the land is thrown open for selection. I want to give the miller a clear run for his money. All reserves should be fenced to keep cattle out, otherwise the bush is spoilt and destroyed. Many of the reserves here are not fenced. As soon as settlement gets up to a reserve the farmers want it. There was a fine bit

of bush in the Wairarapa—the only piece of native forest left between Napier and Wellington-and many attempts were made to get hold of it, the last excuse a settler urged being that his wife had rheumatism on account of the shade.

7. *Mr. Lethbridge.*] What was the ultimate fate of that reserve?—I suppose they got it at last. I came away.

8. *The Chairman.*] What are your views as to water-conservation?—The great difficulty we had when I was in the Department was to conserve the sources of the water-supply. In places in the Wairarapa you can see the dry beds of creeks where now after a heavy rain the water does not flow at all. From one-quarter to half a mile of shingle is now exposed at Ngapara Bridge, near Woodville, and there is great trouble in regulating the flow of the river. Where there is alluvial soil and a shingle bed the tendency is for the river to make on one side and lose on another, the reason being that too much bush has been felled. Settlers should be encouraged to plant trees, but the Government should make it a condition, when setting aside a reserve containing bush, that that bush should be retained in order to keep the water-supply intact. As to the question of forming plantations in suitable localities, in putting timber on a railway-truck you take the cream out of the profit. I would urge that plantations should be made in suitable localities where there is water carriage, in order to reduce the cost of production. The American red-pine grows very fast at Remuera, and is a fine timber. Silting is very prevalent in parts of the country, and is due to the bush being cleared off the hills, causing the rivers to silt up. As to officers' reports on timber land suitable for reservation, it is only necessary for a Minister to visit the district and the proposed reserve is wiped out. As to loss in the value of timber in milling operations, if we take the Waipoua Forest, it is estimated to contain 100,000,000 ft. of timber. That does not mean 100,000,000 ft. of sawn timber, but only 60,000,000 ft. perhaps, the loss in value being 33 per cent., and only two-thirds of the remainder is first-class material at the most. "Railway freights" simply mean freights on second-class timber. There is a lot of second-class timber left in the bush that it does not pay to bring out. A competent valuer should be appointed to decide what is first- and second-class timber, and adjust the matter accordingly. The Kaihu Valley Railway was not finished when that timber was all cut out, and a Commission recommended that the line should be taken up. The demand for timber is increasing, and too much is exported, notwithstanding that half enough timber is not put into the houses now. In the case of an eight-roomed house I inspected the other day I could carry all the timber in the roof in one load. I bought 42 ft. this morning for lattice-work, and paid 14s. for it. As to the use of kauri timber for mining purposes, this timber is too valuable for such use, and yet it is used for sleepers, posts, and mining.

9. Do you see any reason why a miner should get his timber for nothing?—Certainly not. He should pay just the same as any one else. Those regulations should be amended, for the mixed authority as between the Warden and the Commissioner imposes no check as to what is bought and what is taken away. A competent Ranger should be appointed to measure all timber. I notice that many people advocate putting an export duty on timber. I do not think it is fair that a man holding a timber-area from the Crown, in addition to rates and taxes, should have to pay an export duty on what he sends out. The position might be met by providing, in the case of all timber-areas now held by the Crown, that the preference should be given to any applicant undertaking to utilize the timber in the Dominion. More timber has been exported than has been used in the Dominion, and the best at that.

10. *Mr. Murdoch.*] Have you ever known of a kauri bush that was not burnt when the settler or gum-digger came about?—When Puhipuhi settlement was started I tried to prevent the gum-diggers going in, and suggested it should be confined to settlers only, so that in the event of a fire the latter would be able to give their services in putting it out. But the bush was burnt by the diggers eventually. When I came to this district there were townships in Waipoua Forest, and roads through it, but I had the whole lot cleared out. Then I started on the cattle, and the last time I saw it it was in as good a condition as ever. There is an excellent man acting as caretaker, and he loves every tree in that bush. The only way to preserve that forest is to put on more than one caretaker to guard it, and keep everybody out.

11. *Dr. Cockayne.*] Even with all those risks that bush is not being burnt?—If the gum-diggers were allowed in there would not be a stick that would be worth removing.

12. Did these men burn the bush when they were living there?—No; there were plenty of places for them to camp. They did not start fires inside. It is the only kauri forest I know of that has not been burnt.

13. Can you account for that by the extreme wetness?—To some extent; but that bush is not as wet as Warawara, which is absolutely isolated. Some sections were about to be thrown open on the creek, near Waipoua, and I reported to the Government that to open that land for settlement would mean the end of the forest, as the trees would ignite at the tops from outside fires. To preserve that bush there should be fences and banks to check an approaching fire. At certain times you should burn off the strip of fern approaching it.

14. *The Chairman.*] That would cost a great deal of money?—The caretakers could be used for doing the work.

15. Do you advocate preserving that forest for all time?—It should be preserved as a nest-egg. It will be cut down eventually, but it should be reserved for the use of the people in the Dominion or for Government purposes.

16. *Mr. Lethbridge.*] And cut by the Government for Government purposes?—Yes.

17. *Dr. Cockayne.*] Supposing a recommendation were made that that bush should be milled by the Government, would it be a popular thing in Dargaville?—In milling by the Government you create a new staff, and incur large expense.

18. Would these agitators like the Government doing it?—The Government could not cut it out as economically as the large mills.

19. *Mr. Murdoch.*] From your experience do you not think Warawara could be kept?—It has been bled and bled. I counted in some trees from seventy to eighty incisions, and there were many more in others. Some of the trees were sickly, and the young ones everywhere dead.

20. But there is a natural barrier around the back of the Warawara bush?—It is an easy bush to keep providing the trees are living, but it is a problem how to get the timber out. I would say, keep both bushes as long as you possibly can.

21. *The Chairman.*] Is there any other matter you wish to mention?—I support Mr. Leyland's suggestion as to the question of the extension of time for timber-cutting, and always recommended it. Give the millers a reasonable time to work out the area—say, two or three years—and if it does not suit their convenience to do the work in that time then charge them a rent equal to that obtainable for the land for settlement purposes, and let them hold it as long as they like. Bleeding kauri-trees is fatal to the lasting qualities of the timber, as the gum is a vital necessity to its life.

22. Have you had any experience in country where deer are roaming?—In the Wairarapa I have seen them, but I cannot say if they were damaging the native bush. Cattle destroy the bush, and I suppose deer also. The remaining bush should be preserved if possible, as people will soon feel the want of timber-supplies. At Herekino two 50-acre sections containing kauri were abandoned. I recommended that they should be reserved for the future use of the local residents, but the amount of pressure that was brought to bear on the Department for a number of years to open the sections again would surprise you.

ROBERT CRAIG POLLOCK sworn and examined. (No. 56.)

1. *The Chairman.*] What is your occupation?—Government timber-measurer. I have been twelve years with the Government, and with private firms fifteen years before that.

2. What is the system adopted in this district for measuring timber?—In some cases the boundaries are defined for us, and we only measure small sections already surveyed; but where the area is large we work on our own lines around the boundaries. We then clear the tree of vines, and take the girth at the base at a point as high as one can reach. We take the height with an Abney level.

3. Are the trees branded as they are measured?—They are branded below the saw base, and they are also numbered.

4. How then do you arrive at the superficial contents?—We use a ready reckoner, and 1 ft. in 20 ft. is allowed for tapering. With a 40 ft. tree we only allow 1 ft. There is no uniform rate; it is a matter of experience.

5. What allowance is made for the bark in measuring kauri?—6 in., no matter the size of the tree.

6. What other deductions are made?—With dead timber we chop straight into the heart, and where the sap is deep and worthless we take off whatever is on it by the depth. For other defects, as far as we find them, we take 20 ft. off the stem.

7. What is the average cost of measuring a bush, per acre?—Less than 1d. per 100 ft.

8. In a fair average bush how many trees could a man measure and brand in a day?—Two men in good bush could do from ninety to a hundred a day of kauri. Rimu might be a little more scattered and require more clearing.

9. How are the brands put on a tree?—We cut them with an axe as near the root as possible. We put the Government brand on with a hammer.

10. Is it a more satisfactory way from a departmental point of view to have all the timber counted and measured before it is sold?—Decidedly. The present system was initiated by Mr. Kavanagh. Before that we used to mark the trees above where they would be cut off.

11. Has any difficulty been experienced in this district respecting the dual control between the Warden and the Commissioner?—Yes. At Tapu Creek there is a lot of timber which is rapidly becoming worthless, but the Warden will not sell it. It should be sold, otherwise it is a loss to the State.

12. Is there any demand in that locality for timber for mining purposes?—There are no mines working there. One fire would render it worthless.

EDWARD BARTLEY sworn and examined. (No. 57.)

1. *The Chairman.*] I understand you are an architect?—Yes, practising here since 1880. Before that I was a builder.

2. One question we are inquiring into is the probable demand for timber in the future, and how far that can be met by the Dominion's supplies. We should like your opinion on the point?—For the last three years I can safely say that three-fourths of the timber I have been specifying and using in my work has been Oregon pine.

3. Do you find that suits the purpose better than the local timbers, or is it on account of the price?—On account of the impossibility of getting local timber. We can get Oregon up to 70 ft. lengths, but we would have to wait months to get that length in kauri. If I had had to rely on kauri for the King's Theatre I do not know when it would have been built. The addi-

tional cost for kauri also is very great. We want the long lengths for tie-beams. One line of wrought weatherboards I complained of only three months ago. It was charged up at £1 8s. a hundred. No wonder our villa residences are all stopped, and carpenters are walking about.

4. How would building in permanent material compare with wood?—About 30 to 40 per cent. higher.

5. As the price of timber advances do you think more buildings will be erected in permanent materials?—In our climate there is nothing to beat the large wooden villa. Properly built it will last fifty years, as some of the old buildings are doing now. Forty years ago they used nothing but heart timber; now either a medium kauri or O.B. rimu. I am living in a house thirty years old, which is just as good as the day I built it, and it will last another twenty years. Give me a good wooden building on a concrete or brick foundation, with slate roof, and you have a house that will last a lifetime.

6. Are there houses such as I describe now being built of brick or concrete?—Yes, and that means plastering inside, adding 50 per cent. to the cost. In using Oregon pine we can plaster with some security; not so in the case of kauri, on account of shrinkage at the ends.

7. Is the Oregon pine as durable as our good kauri?—Years ago we used a lot of Oregon pine, and about 1860 a cottage was built here of that timber, and it is perfectly sound to-day. In Durham Street, also, a store was erected in the early "sixties" of Oregon, and the joists are just as good to-day as when they were put in.

8. How would the insurance on a wooden building compare with that on one of permanent materials?—There is a considerable difference. At the same time it is generally supposed that a brick building will not burn. There are about ten thousand villas in and around Auckland, and how few are burnt in twelve months? The heavy insurance losses are in connection with brick buildings.

9. The companies must consider wood a worse risk, or else their rates would be lower?—A brick building is a much lower risk—6s. as against 12s. or 14s. for wood.

10. Have you had any experience with *Pinus insignis* timber?—None whatever.

11. *Mr. Lethbridge.*] Do you think the Oregon pine now coming in as good as that imported some years ago?—I could not say with any confidence, but my impression is that it is not as good as we got in the "sixties."

12. Have you had any experience of tawa or matai as a building-timber?—No; ten years ago we had plenty of kauri, and now we cannot get heart of rimu.

13. *Mr. Clarke.*] Do you not think it would be wise to immediately start planting in view of the difficulty of getting timber now?—Yes, if you plant quick-growing trees.

14. Do you not think our native forests are practically at an end, or within reasonable distance of it?—In another ten years the kauri will be pretty well wiped out.

15. Would you favour a proposal to retain the balance of the millable kauri in New Zealand for the use of this Dominion solely?—It is very deplorable that if we want a bit of kauri for our own use we cannot get it, while shiploads have been taken away of large flitches—all heart. What little we are able to get is sap—second-class stuff.

16. And that process is still going on to-day?—Yes. It is not doing New Zealand any good to have all its kauri going away overseas.

17. Then you consider it would be a wise policy to retain it here for our own use?—I think so. The exportation of kauri ought to have been stopped many years ago, but I understand the high price locally has stopped the exportation a lot.

18. Do you remember that during the Timber Commission evidence was given that rimu could only be depended on to produce from 7 to 10 per cent. of heart timber?—Certainly.

19. In the case of the other timbers we know that when the kauri is worked out we must of necessity depend very largely on timber which is not heart?—That is correct. If we want heart of rimu now we have to give a fancy price, because the heart is selected for the cabinetmakers.

20. Then if we want good strong timbers in the near future is it not the duty of the country to immediately carry on a large system of planting and afforestation?—That is a question of policy; but it is a great shame to see our timber going away, and we cannot get a stick.

21. Independently of the question of policy, do you not consider it is a matter of national necessity to start and replant largely?—Yes, but there is another side to the matter. Supposing you have from 2,000 to 3,000 acres of land of good quality, it would not be advisable to plant that area with trees when butter-fat would be more productive. Dairying is better than trees.

22. Assuming we have areas not fit for dairying, but which would grow trees, would it not be as well to plant them?—We have not those areas in the Province of Auckland.

23. *Mr. Lethbridge.*] What areas?—Areas that we can say are valueless excepting for planting trees.

24. *Dr. Cockayne.*] What would it cost to turn the waste gum lands into lands yielding butter-fat?—That is too difficult a question to answer. It would be only the gum lands you could plant with any chance of making the venture profitable. The gum lands look very poor, but I built a house in Union Street, and you cannot imagine anywhere a worse bit of clay soil than there is in that district, and before very long I had a garden there which could be worked by the spade and could not be beaten in the district. Gum land, if properly drained, will grow anything, especially fruit.

25. *Mr. Lethbridge.*] Do you advise any one with capital to take up fruitgrowing on those lands?—There is a great future before the north in regard to fruitgrowing.

26. *Mr. Clarke.*] Would not the proposed plantations on such land act as a protection to the gullies which could be used for fruitgrowing?—Yes. I have seen paddocks up north on the gum lands with good grass on them.

JAMES TROUNSON sworn and examined. (No. 58.)

1. *The Chairman.*] You are a sawmiller, I believe?—Yes.

1A. One matter we are inquiring into is whether, in view of the increasing demand for white-pine timber and the diminishing supply, its exportation should be prohibited. Have you any remark to make on that question?—I think its export should not be prohibited. The Government sells the timber for the highest price it can get for it—on their own conditions—and it would be wrong to put a tax on that timber after the miller has bought it. If the Government wish to preserve the timber, and desire to impose certain conditions with that end in view, a very important question is raised. I pay rates amounting to £200 a year to the Hokianga County Council for a bit of kauri bush I hold at Kaihu. It is all very well to talk of saving your timber when one is paying £200 a year to one local body, but how is it to be done? You cannot very well compel the owner of the land to reserve the timber and then rate him to the full limit. The Government lately sold some timber-rights at Kirikopuni to the Kauri Company at 6s. a hundred feet. Would it be fair to put another 3s. on that before allowing the company to ship it?

2. *Mr. Lethbridge.*] Is there any taraire in the bush you allude to?—Plenty of it. I intend to put in a tram and work the whole of that area. It would not pay me to leave any live trees.

3. Do you know the Waipoua Forest?—Well; and also the value of kauri timber. I gave a piece of 60 acres to the Government, and it turned out all right. I saved it. I consider the land at Waipoua Forest is more valuable to turn to good account than to reserve the timber, which is in danger from fire through the progress of settlement. For twenty years I paid rates on kauri timber. Then I bought some land near the place where I held the timber-rights, and I contemplated spending any money I got out of the timber on that land; and on it I subsequently carried from five thousand to six thousand sheep, and got £1,000 for the wool off it the other day.

4. What was the area?—A lot is carrying two sheep to the acre, and it is paying me now far better than leaving the timber would have done. The area of the Waipoua Forest is nearly 25,000 acres, and that is being kept locked up for the sake of a bit of kauri bush which nobody can see. The settlers are made to go round, but as settlement progresses the fire will go in and that bush will be destroyed. You might expect me to be naturally biased in favour of my own district, as I want it to prosper; but I have the finest flock of sheep in New Zealand on the land I speak of, which is an argument in favour of utilizing it.

5. *The Chairman.*] You consider the land in the Waipoua Forest is suitable for settlement?—It is land equal to, and in some places better than, the land I have in my holding. I felled everything, got a good fire through it, obtained the best grass-seed, and I was surprised at the result. I held a piece of bush at Kaihu, and offered it for sale before clearing the timber off my land. I offered it at £2 an acre, but the timber being there nobody would buy it. I then put it in grass, and I have since been offered £15 an acre for part of it.

ROBERT HALDANE MAKGILL sworn and examined. (No. 59.)

1. *The Chairman.*] You are M.D., and District Health Officer for the Province of Auckland?—Yes.

2. You wish to offer some evidence on the question of tree-planting by consumptives, and the suitability of that occupation in connection with the treatment of consumption?—Yes. My evidence is really contained in the departmental report for 1908, a copy of which you have, on the suitability of the Taupo district for the purpose mentioned. It is considered a very suitable district for the treatment of consumption, and tree-planting is a suitable kind of work for such patients. It is very difficult to find suitable work for convalescent consumptives, but as tree-planting is required in that district the two matters seem to work in rather well.

3. How long was the scheme in operation at Taupo?—There was a little trial scheme in operation for two years with about fourteen patients, but it was not at Taupo but at Rotorua, about eight miles out. On the whole the experiment was satisfactory, and I think the men were able to sustain themselves from their wages. In fact, some made a little over, and were able to do sufficient work to pay their own expenses, although they were scarcely the class of men I intended it for, but a little more advanced in regard to the disease. I hoped to secure people who were in the early stages of the disease, and these men had been under treatment at Cambridge.

4. Why was the system given up?—It was abandoned about the middle of 1910, the chief reason being that the land immediately around the camp was all planted and the men had to go a very long distance, and it became beyond their powers to take a long walk to the planting-place, do a day's work, and return at night. It was felt at that time that the question was one largely of land, and I did not care to start on a fresh basis on a larger scale.

5. On what basis were the patients paid?—On piecework, I think. They were paid by the Forestry Department.

6. In the event of any recommendation being made by this Commission that such labour should be utilized for this purpose, could you state what number of men would be available?—It is a difficult matter to estimate, but it would be quite easy to have a camp of sixty patients able to do a reasonable day's work.

7. Would it be necessary in such a camp to have a medical man stationed?—Not strictly necessary, because the class of patient would not be men requiring medical treatment; but it would simplify matters to have a medical man there to enable us to have a freer hand in sending patients to such a camp.

8. It would be at least reasonable to have a doctor within easy distance if required, would it not?—It would be sufficient if there were a well-trained nurse in the district, and I trust that before long we shall have a district nurse in the Taupo district, whose services would then be available.

9. Is the Auckland District the only one in which there are homes for consumptives?—In connection with all the large hospitals there are similar institutions—Otaki, Cashmere Hills, and Palmerston South. Those are places for the treatment of consumptives who require medical attention. I want an outlet for patients who are cured. It is difficult to get people to take them, as they seem to fear a patient who has been in a sanatorium more than one who has not been there. We have a serious difficulty in finding an outlet for these people who can work, and this would provide a most excellent way of dealing with them.

11. *Mr. Lethbridge.*] I suppose a good many of the patients are without means of livelihood, and you want to help them over the difficulty?—That is so. We want to give them work for two or three years, because occupation of that kind would fit them to go back to their ordinary duties.

12. *The Chairman.*] In the camp you had what provision was made about cooking?—They had a cook who was one of the ex-patients, and there was a nurse in charge. I would make the place one not only for patients who had been in the sanatorium, but also those approved of by the Department before going to a sanatorium. They would then not be sent to the sanatorium, but would go straight to a place like Taupo. They are rather spoilt by the treatment at the sanatorium, so it would be better to send them to Taupo direct.

13. What provision would there be for overseeing their work?—I cannot give you that detail, I am afraid, as the work was all done under the supervision of an officer of the Forestry Department, Mr. Goudie.

14. *Dr. Cockayne.*] Have you had any experience of the climate of Central Otago?—I should imagine that it would be a very suitable climate for the treatment of consumptives, even better than Taupo, excepting for the dust-storms.

15. Do you not get dust-storms on the pumice plains?—Not so bad. But I have had no personal experience of Otago Central. One of our officers reported it to be a very suitable climate excepting for the dust-storms.

ALEXANDER McCOLL sworn and examined. (No. 60.)

1. *The Chairman.*] What is your occupation?—I am a timber-merchant, and wish to refer to two matters. I have had a lot to do with the forests of New Zealand, and my fifteen years' experience has convinced me that our architects, builders, and people generally need educating as to the value of many native timbers which are now destroyed as worthless, but which are of real utility for milling purposes. I suggest that the Government should circulate leaflets containing full information respecting the qualities of the woods I refer to. You cannot now sell either tanekaha or silver-pine.

2. *Mr. Lethbridge.*] Is taraire any good?—Yes, a splendid timber.

3. Are you acquainted with Kirk's "Forest Flora"?—Yes.

4. There is an account given of every timber in that work?—It should be abbreviated a bit. That book is only looked at by a few people—1 per cent.—and it should now be revised and brought up to date.

5. *Mr. Murdoch.*] How are you going to save the timber you speak of? Can you induce the settler to hold the trees if he wants to put the place in grass?—The settler will have other timbers to work on, and, that being so, if the information I suggest were disseminated the taraire would be worked out along with the kauri and other timbers. There has been a great change in the market in favour of secondary timbers the last few years. There is a market here for millions of feet of taraire.

6. *Dr. Cockayne.*] Supposing a settler cuts down all the rewarewa, in what market does he sell it?—That timber comes in for a number of secondary purposes, and if the public were educated up to its use we could find a market for it, and also for other New Zealand timbers—in fact, for all.

7. You ask that leaflets should be published defining the qualities of New Zealand timbers?—Yes. Tawa is overlooked a lot. The difficulty about it is with regard to seasoning. It will rot very quickly in the ground, but if seasoned it will last a long time. Fifteen years ago I sent some to Queensland, and was informed that it was the finest possible timber for wine-casks. A trade in tawa timber could be developed to an enormous extent with Australia, and I could not supply the orders I got for it.

8. *Mr. Murdoch.*] I suppose they used large quantities of tawa for butter-boxes twenty-five years ago?—Yes; it is better than kahikatea, because with the latter you have to wax the boxes, but there is no necessity to wax the tawa boxes.

9. *Dr. Cockayne.*] Do you have to wax the kahikatea boxes? Is it not the one timber in the world you do not need to paraffin?—They paraffin it here, but in my opinion it is not equal to tawa. There is always a certain odour from kahikatea.

10. *Mr. Lethbridge.*] Do you know the Waipoua Forest?—I issued a paper on the question of afforestation some time ago. That forest is a bone of contention, inasmuch as if forestry is going to be carried out on an extensive scale in New Zealand the Waipoua Forest should be set aside as a national forest, and the Government ought to take out all the kauri timber it requires solely for the purposes of the State. The whole bush should be placed under a forestry law whereby the age and growth of the native trees there now would be measured and tested. The actual growth per year could be ascertained. Then the Government should take out all the matured timber every year, and not interfere with the natural growth Thus the forest could be protected and kept going for all time. Replanting could go on at the same time.

11. With native trees?—With certain forest-plants.

12. *Mr. Adams.*] What about fires?—In America, where fires were very frequent, since they have gone in for practical forestry and put their bushes under competent Rangers fires have been reduced to a minimum.

13. *The Chairman.*] Have you been in the Waipoua Forest?—No.

14. Are you aware that there are not sufficient saplings in that bush to keep regeneration going?—I cannot say; but I understand that certain portions contain a fair quantity of young bush.

15. What is about the quickest-growing native tree?—Taraire is about the fastest, and you can get fair-sized trees of it in twenty-one years.

16. *Dr. Cockayne.*] Would you advocate settling the thousands of acres of available open land before dealing with the forest land?—Exactly. Conserve the forests under every condition possible. Five hundred million feet per annum will be required in future for various services.

17. How are you going to get it?—Conserve all you can, and plant if you are going to continue exporting.

18. Would you still advocate planting if every £100 worth of timber were going to cost £200 to produce?—Under those conditions, certainly not. It must be produced under proper commercial conditions.

WILLIAM JOHNS sworn and examined. (No. 61.)

1. *The Chairman.*] You are a member of the Crown Lands Board of Auckland?—Yes, and a farmer.

2. Are there any special points in connection with our inquiry you wish to speak about?—Bearing generally on your order of reference I think I could give you some useful information, as my experience extends over half a century in New Zealand. After I arrived here in 1863 I worked in the bush on Coromandel Peninsula. After the lapse of fifty years I visited that locality, and I found one-third of the creeks dry because the land has been denuded of its forest covering. Those creeks that are not dry are simply turgid streams in wet weather, and comparatively dry at ordinary times. From a climatic point of view the denudation of our forests is extremely injurious to the Dominion. The way we are wasting our timber is a matter of deep regret to myself, and I am glad we are beginning to appreciate the value of the forests. A great deal of our timber which is of high economic value is thought very lightly of. As to the Waipoua Forest, the Land Board recently visited it, and in my opinion it would be a national calamity if that forest were allowed to be destroyed wholesale at present. It is about the only remaining big kauri bush, and should be preserved if possible, although I do not say that the timber should be altogether kept from our own people.

3. *Mr. Murdoch.*] There is a bush at Whangape?—Yes; there are three altogether. The timber people look at the matter only from the £ s. d. point of view, and so I strongly support the reservation of the remaining kauri forests as long as possible to prevent their wholesale slaughter. So far we have only played with the question of afforestation, and should be more alive to the necessities of the immediate future. I do not think the remedy lies in reafforesting with native timbers, as they are of extremely slow growth. It would be better to start with a few of the exotic timbers. I suggest the *Sequoia sempervirens*, or red-cedar, of California. It is the best timber-tree you could introduce here, being of rapid growth. Then the larch and *Pinus insignis* are not to be despised. I planted a clump of the latter, and the trees grew to the height of a ship's mast; and the timber is useful for boxmaking, lining, and many other purposes. This pine is a splendid timber-tree which we cannot have too many of. It should be planted in large areas to be of any commercial value. One-fourth of the Auckland Province is unsuited for anything but fruitgrowing and afforestation with *Pinus insignis*. I had one tree of the latter twenty-four years old, 127 ft. high, with a diameter of from 3 ft. 6 in. to 4 ft. It was grown in Waikato. A great deal of injury is done to our climate by cutting down belts of timber that should be preserved, when we have a vast area of good, open country that should first be settled before wooded lands are thrown open. Many a settler cuts down every tree on his holding, and looks on trees as enemies. It is advisable to conserve our little remaining bush, cutting what is actually needed under strict supervision. Titoki is a good timber for bark for tanning purposes, but it does not attain a large size, and would not be worth planting. Puriri will not grow where there is frost. The kahikatea should be conserved as much as possible, as it is our best timber for butter-boxes. I have grown it on good land in a moist situation, and the trees have made 5 ft. a year. I do not profess to be much of an authority on gums, but I do not think it would be wise to plant the *Eucalyptus globulus*, as it has no value as a hardwood. Ironbark, jarrah, red-gum, and stringy-bark would prove payable timbers, but I do not think the common gum should be planted. Some years ago I went through the West Australian jarrah country, but they are doing what we are—cutting the timber, sending it away, and wasting it. The Australian hardwood is really invaluable, but is probably too slow to grow here.

4. *Dr. Cockayne.*] Would north of Mangonui be a good place for them?—Ironbark grows to a great height. I had several 50 ft. high by 1 ft. through, and they seemed to thrive. In Western Australia, at Harvey, eighty miles from Perth, there is an experimental farm where many young forest-trees have been planted. Twenty-eight acres of *Pinus insignis* have been planted, and at seven years eight months old they were from 20 ft. to 30 ft. high. The manager considered they were his best. In South Australia the director called our attention to a splendid patch which had been sold at £100 an acre. The trees were twenty-five years old, and had been sold for boxmaking—nearly 60 acres. We cannot go wrong in planting our poor gum lands with *Pinus insignis*.

5. *Mr. Adams.*] Have you taken into consideration the fact that the *Sequoia sempervirens* loses its leader in New Zealand?—I grew twenty of them in my experimental ground in Waikato, and when I left they were over 70 ft. high. Planted on a large scale they would not be likely to lose their leaders. The *macrocarpa* also is of value as a timber. Sir George Grey recommended the red-cedar, and sent me a few trees, which I am trying in my orchard now.

HARRY MAY SKEET sworn and examined. (No. 62.)

1. *The Chairman.*] You are the Commissioner of Crown Lands for the Auckland District?—Yes.

2. I believe you have had experience in Westland and Southland districts as well as in Auckland in regard to dealing with timber matters?—Yes.

3. Do you consider from your experience here that the system of having the timber all measured before it is sold a better one than the one in vogue in the South Island?—Yes.

4. Under it the Government get better returns, and there is less waste of timber?—Yes. I consider that not a single stick of timber should be sold excepting under proper measurement. Then we know what quantity we have, and the buyer knows what he is buying. There should be only the one system, and the administration should be entirely under the Lands Department, thus saving the expense of the present dual control. Under the latter system you never know what is going on.

5. And also for the reason that the Warden has no officers with the technical knowledge requisite to enable them to deal with these matters?—Of course, he gets the information from the Lands Department. But he also sits as a Magistrate, and is always amenable to legal argument, and the more plausible the lawyer is in putting his case before the Warden-Magistrate the more likely is the latter to be swayed by the interests advocated by the lawyer. I have always noticed that when a decision is dependent almost solely on legal argument it is likely to be very amenable to the same. However, we do not deal with lawyers at all, but with the matter simply on its merits in the interests of the State.

6. In regard to the laying-off of scenic reserves, would you advocate that they should be confined to broken country which is unsuitable for agricultural or pastoral purposes, or also set apart in connection with settlement lands where there is a piece of bush?—I would not lay off a scenic reserve excepting it is in a position where it would be reasonably safe from fire, or from the damage caused by settlers. If it is abutting on a road-line you could protect that piece, but to distribute these reserves about in little odd corners is an absolute mistake. The settlers fire the environments; then there is the excuse of the spread of noxious weeds—which generally come from their own land—and many other pretexts to get the Government to spend money on clearing the weeds or something else. Unless in large areas absolutely protected from the risk of fire I am not in favour of setting aside such reserves. I am in favour of making reservations for climatic purposes.

7. Would you advocate the tops of the high hills being preserved for climatic purposes?—That is the whole consideration. Here in the north we have had no rain for six months, and the streams are dry. It is only by means of these bush-areas on the tops of the hills that there is any water conserved. My experience is that above a certain elevation the land is not very useful for stock-raising, and we have not got enough bush on our hilltops to preserve the natural rainfall of the country.

8. As to the State Forest Reserve at Raetea, would it not be better to change it to a climatic reserve to prevent any dealing with it in future as the result of pressure?—The Land Board has nothing to do with the State forests—only the Commissioner. This reserve should be made, as far as the low land is concerned, inalienable, and then it would be a national asset in years to come. Bush collects the rain, and we are told the Auckland Settlement up north has been a failure because of the wetness of the climate; but if we felled the bush on the high land that collects the moisture we shall have dry years in the future.

9. *Mr. Murdoch.*] Central Otago over again?—Yes. Oamaru is one of the driest parts in New Zealand. The clouds are drawn away from the coast and collect away back on the hills. The rain does not fall on the coast, but with large areas of bush along there the moisture would be held and distributed.

10. *The Chairman.*] When in the Taranaki District did the question of deer damaging the scenic reserves come under your notice?—We had no deer then. Two were let go on Mount Egmont, but one was killed. The cattle are eating the bark of the trees at Mount Egmont on the Stony River side. They bark the houhou, but will not touch the mahoe or tawhero.

11. And if all the young shrubs are eaten out there is the greater liability of fire sweeping the bush away?—Certainly.

12. In regard to the estimates of timber available in the forests made by the Department at various times without accurate measurements taking place, do you think much reliance should be placed on those estimates?—They are only estimates. In Westland I used to write them down to one-third. The timber may not be there. If you can get small areas you can make your estimates with a reasonable degree of accuracy, but not over miles of country.

13. What about estimates of timber growing in the Fiord County of Southland?—You could not do it. Our estimates here of small areas are sometimes one-third less than they should be, and sometimes a bit more.

14. *Mr. Murdoch.*] As to the forest reserve at Broadwood, the Ranger evidently recommended that a large area of 9,000 acres should be cut up for settlement?—Sold, I think.

15. Was that recommendation due to local pressure?—No. He recommended a large area being kept back and made a climatic reserve—it was on the top of the hill—but the other part being fit for settlement should be cut up and used. His report would be subject to revision, of course. He recommended a strip along the main range.

16. It looked to me when the Commission inspected the locality as though what is there should be retained?—Well, all the better. There is a legitimate demand for land, and people tackle places now they would not take up years ago.

WANGANUI, MONDAY, 28TH APRIL, 1913.

THOMAS DICK CUMMINS examined. (No. 63.)

1. *Mr. Adams.*] I understand you wish to make some representations on behalf of the River Trust?—Yes. I am the chairman of the Wanganui River Trust, and our duties are somewhat in common with those being performed by your Commission. The principal work of the Trust is clearing the river-channel and keeping the river open for navigation, but if we cannot maintain the water at a certain height our position will be a bad one, involving the stoppage of navigation and the waste of the expenditure already incurred. Looking to the future, unless the forests at the source of the river are reasonably conserved navigation may become impossible in the summer months, when the river is naturally low. The vast quantity of the water that comes down the Wanganui River is from the mountains of Ruapehu and Tongariro, and the Ongaruhe Stream and tributaries. Therefore, if the bush in these localities is destroyed, our sources of water-supply will be seriously endangered. I beg to hand to the Commission a copy of a report by one of our late members, Mr. John T. Stewart, C.E., on the subject of bush-preservation on the watershed and banks of the Wanganui River. The late Mr. Stewart was a very live man, of more than ordinary intelligence, keen powers of observation, and well qualified to deal with this matter. It will afford all information on the subject of water-conservation as the matter affects the Wanganui River. I support his views on behalf of the Trust, and strongly urge the Commission to take the necessary steps to conserve the bush at the headwaters of this river for climatic reasons, commercial reasons, scenery-preservation, and in the interests of the river and district generally.

2. We are in sympathy with you regarding the matter. Have you any specific recommendation to make to the Commission in support of your views?—I base the whole of my argument on the report of Mr. Stewart.

3. *Mr. Clarke.*] It has been represented to us that an effort is being made by some one to acquire a portion of the area now supposed to be under the control of the Trust. Is that the fact?—All Crown land to a strip one mile wide has been reserved up to the skyline for scenic purposes. As far as we are concerned we are not so keen on that reservation as we are over conserving the sources of the river. If you look at the map of the river supplied by Mr. Stewart you will find that the watershed is rather a peculiar one. Local rains do not affect the watershed from Pipiriki down, and we do not think that close to the river great damage would be done by small holdings of from 50 to 200 acres being allowed; we are looking more to the necessity of protecting the sources of the river. Four years ago I made an inspection of the river when the water was lower than ever before in its history, and we found a reasonable quantity coming in, but it was all flowing from the larger streams, the smaller ones not affecting the river at all, which flow from the source. It is probable, however, that the one-mile-wide strip on the banks is of material assistance to the river flow. The Trust is very jealous in regard to any bush being touched, as it is anxious to conserve the whole mile reserve with the exception of a small unimproved place here and there which will be revenue-producing.

4. *Dr. Cockayne.*] That one-mile reservation is of great assistance in preserving other parts from fire, and if you allow settlement here and there in that reserve are you not increasing the risk of the bush being burnt and thus affecting your water-conservation?—I appreciate your argument, but the only portion of the land on the river-bank that is likely to be brought to a profit for the sake of producing revenue is the area that is fern-clad only. We conserve all the bush at the head of the river, and only lots not held for scenic or water-supply purposes do we wish to put on the market.

5. *Mr. Adams.*] Do you appreciate the danger from fire?—Quite. On occasions the Scenery Board has only taken up to the skyline, when it would have been far better to have taken the one-mile-wide radius for fire-prevention purposes.

6. *Mr. Murdoch.*] You are of opinion that the headwaters of the streams from the Ongaruhe downwards should be conserved also to help feed the river?—Yes. I might say that recently two deputations waited on the Trust regarding their fencing-lines. They wanted a certain amount of bush land leased to them in order to improve their boundaries. I agreed with them, as I think that bush that is not needed for scenic purposes or for conserving the water, but which might possibly be revenue-producing, should be sold or leased. At a meeting of the Trust next Friday we will probably ask the Commissioner of Crown Lands or the Under-Secretary to detach an officer to accompany a member of the Trust to examine these lands that we think are fern-clad with a view to utilizing them for revenue-producing purposes, or retaining them for scenic purposes. On that report we will act later on. I do not think the Trust would ever ask for more than from 6,000 to 7,000 acres over the whole four hundred miles of the river to be placed on the market, and it is all fern-clad hills.

7. *Mr. W. A. Veitch., M.P.*] I indorse all Mr. Cummins has said. The Wanganui River is a very important public highway, and if its present utility through the want of conserving the water-supply is minimized the State will be put to an enormous expense in building roads and railways to carry the traffic that now is, and should in the future be, carried on that river. Even if the reservation of all the land the Chairman has urged should be taken costs the country a large sum it will be money well spent, and will mean a saving in the end. Owing to the importance of the Wanganui River and its tributaries to the commerce of this country, it seems out of the question for the Commission to adequately deal with the matter in the short time allowed, and I therefore suggest that your members should return to Wanganui before making their report and deal more fully with the question brought before you to-day. I propose to make representations to the Prime Minister to the effect that the local requirements are of such magnitude to Wanganui in particular and New Zealand in general that it is absolutely necessary that the matter should be dealt with finally and adequately by this Commission.

NEW PLYMOUTH, WEDNESDAY, 30TH APRIL, 1913.

WILLIAM ANDREWS COLLIS sworn and examined. (No. 64.)

1. *The Chairman.*] We shall be glad to hear what you have to say?—I am the New Plymouth representative on the Egmont National Park Board. Yesterday the Commission visited the Everett Road Reserve, which was laid off not because the country was rough and bad, but in order to preserve some specimen of the lowland forests in this district. Probably in a few years' time that piece of forest will be the only bit left of the genuine lowland forest. For that reason we oppose the lifting of the reserve if that question is being raised. If any attempt is made to interfere with the Egmont National Park we soon know all about it, as nothing can be done excepting by Act of Parliament; but in regard to the Everett Road Reserve there is a danger of the real facts of the case not being put before the Commission, with the result that the reservation might be lifted.

THOMAS C. LIST sworn and examined. (No. 65.)

1. *The Chairman.*] What matter do you wish to refer to?—I am the chairman of the New Plymouth Expansion and Tourist League, and we desire to bring under your notice the matter of the preservation of river and mountain scenery in north Taranaki. For some time past the League has been urging upon the Government the necessity for protecting and reserving what remains of the incomparable river scenery on the River Mokau. Some of the best stretches have already been destroyed, and more is now threatened with destruction. The former owners of one large block, I understand, were willing to reserve without compensation the bush fronting the block on the riverside, from the water's edge to the skyline, but for some reason that has yet to be explained the Government of the day did not take prompt steps to proclaim the land involved a scenic area. The block subsequently changed hands, and most of the bush was felled and the fire put through; so that where a short time ago some of the most beautiful bush in the world adorned the river-bank, bush which took probably decades to grow and cannot be replaced in less time, if ever, is now a scene of desolation, a veritable eyesore to the visitor. One could probably understand this destruction if the frontage to the river were of any value for settlement, but for the most part it has no value other than scenic. It is to prevent more of the river scenery sharing the same fate that our League is anxious to enlist the support of your Commission. There are considerable areas still remaining that have been surveyed as scenic reserves, which have not yet been gazetted and taken over by the Government. There are also portions of bush scenery on Native land that should be proclaimed. Again, there is a fine piece of bush on a section the lessee of which is willing to hand it over if the Government will pay for the necessary fencing. When approached by the League on this matter recently the Prime Minister expressed his entire sympathy with our desires, but explained that it was a question of finance, involving a cost to the Government of £10,000 for compensation to owners. I submitted then, and do so now to you, that the preservation of this bush for which compensation is being sought is absolutely necessary in the interests of the settlers themselves. Once destroy the bush, and the banks, especially soft banks like those of the Mokau, will sooner or later fall into the river, impede the flow of the water, and ultimately seriously affect if not absolutely block the river as a means of communication—the only means of ingress and egress the holders of most of the sections have, or ever will have, to their properties. But apart from this important consideration, the price put upon the land required to preserve the river scenery could, it appears to those qualified to judge, not be justified before a Compensation Court, and if the State had to pay compensation it would probably be found to be a sum considerably less than that mentioned by the Prime Minister. In any case, it is felt by our League that a strong effort should be made by the Government to secure for present and future generations what is left of the scenery on the Mokau, even if it does entail the expenditure of a few thousand pounds. This river will before very long be as popular a tourist route as the Wanganui River. The road connecting Totoro, at the head of the river, with Te Kuiti is being improved, and with the opening-up of settlement the upper reaches of the Mokau will have to be snagged to allow vessels reaching Totoro. Tourists will be able to leave Te Kuiti, motor or coach to Totoro, and go down the Mokau to the township, thence coming on to New Plymouth. A prettier trip there is not in New Zealand, and everything should be done to preserve the scenery. The mistake was made years ago, before the bushman's axe began its work, and when the whole of the bush for a mile on each side of the river, with necessary outlets, of course, for settlers, should have been reserved, as in the case of the Wanganui River in Mr. Ballance's day. This may not have been easy on account of the complicated ownership of most of the lands affected, but for these laches posterity will have something very pertinent to say of our legislators. Another matter to which our League would direct attention is the maintaining of the Patua or Kaitake Ranges as a scenic reserve. An effort is being made by interested parties to have the low-lying land on these ranges thrown open to settlement, the statement being made that at present the reserve is nothing else than a seed-bed for noxious weeds. To cut down this bush will be a scandal and a calamity that would fall most heavily on those anxious to bring it about, and I trust you will not agree to it. The bush-clad ranges act as nature's reservoirs for the whole of Taranaki. But for this provision the province would not be the well-watered, fertile, and prosperous district it is. The water, unrestrained by the natural forest covering, would tear its way quickly to the sea, carrying probably much good land with it, and in summer-time soon drying up and so depreciating the stock-carrying capacity of the land. As for the ranges harbouring weeds, it is difficult to see how this can be so where the bush and undergrowth is luxurious. Once cut that away and the weeds would have an opportunity to flourish which they do not possess now.

The League is anxious only to see national assets of pre-eminent value and importance preserved, and we trust the Commission will also take this view.

2. Is the Patua Range permanently reserved now?—Yes.

3. Is it fenced?—Partly, but the open part of the range is let.

4. Could that open part be fenced against cattle?—It is not fenced between the bush and the open country, but only as between the reserve itself and the surrounding country. We want to prevent any encroachment on the reserved portion of the range. The society has made repeated representations on the subject to prevent cattle destroying this forest, but nothing has been done. When it was attempted to have this made a reserve and inalienable, the objections some years ago came from the very people adjoining the land in question.

5. Are you aware that some of the land fronting the River Mokau is reported to have changed hands lately at £6 an acre?—No. A lot of the land facing the river is of a precipitous nature, and the most valuable from a scenic point of view. There are one or two very valuable flats, and you might allude to those. They were cleared years ago, and do not affect the scenic aspect of the question.

6. A sub-committee has already visited the Mokau, and we recognize that a great deal of the country is precipitous, but when these cases go before the Compensation Court the price put on some of the frontages to the river is very high?—The League recognizes the necessity of giving access to the sections fronting the river and these flats, and I presume the price paid for the flats—£6—can be justified. We do not wish to stop settlers getting access to their holdings, but we do say that land of no value from the point of settlement has been burnt and the scenery destroyed.

7. *Mr. Lethbridge.*] Do you think the people holding that land, and who should know something about its capabilities, would fell bush and grass country that was of no value?—You never know what they will do. I was speaking to a contractor a few months ago on this subject, and he said, "We had a contract to do so-many acres, and we have felled the bush right down to the river; but I admit that the land will not carry a rabbit to the acre."

8. *The Chairman.*] Are there any patriotic people in Taranaki who would be inclined to subsidize any efforts that might be made to preserve the places you mention?—Taranaki is well provided with reserves, to the credit of its people, who have done much in that direction. The recreation-ground was practically made and has since been maintained out of public subscriptions. The expenditure on Mount Egmont Park has been borne by the people of this town, although certainly the Government have helped. I think we have done our share. With regard to Mokau, I submit it is a national matter, the most valuable asset to New Zealand, and should be treated accordingly. The late Prime Minister, Mr. T. Mackenzie, told us that Mokau River contained easily the best scenery in the Dominion. The Wanganui people were not asked to bear the cost of reserving the bush on that river, and why should not the State treat this district similarly? Then, again, the Mokau River is fifty miles from New Plymouth, on the border of the Auckland Province, and the Auckland people might very well be asked to contribute their share to conserving the Mokau bush. It is a national matter and in the interests of settlement that the scenery along the Mokau should not be destroyed, otherwise the river will become a sludge-channel, and the people who are now asking exorbitant sums by way of compensation will be the first to cry out.

ROBERT CLIFTON HUGHES sworn and examined. (No. 66.)

1. *The Chairman.*] Do you wish to make a statement?—With regard to the remarks of Mr. List on the Mokau River, I wish to state that I saw that country before a tree was felled, when it was in a state of nature. I saw it again after a lot of useless clearing had been done, and it was heart-breaking to see how the trees that made the place so beautiful had been destroyed. They were felled on the steep cliffs, and the charred stumps were lying on the cliffs. The country was consequently opened up to the blackberry and other noxious weeds, country which is wholly unsuitable for grazing or reproductive occupations. I sympathize with the Government over the question of funds, but the State should bear in mind that New Zealand stands almost foremost in the world as a tourist resort. I trust the Government will supply the funds to preserve the scenery on the Mokau River up to a reasonable extent. I would not allow another tree on the river-bank to be cut down.

2. Are there any patriotic men in Taranaki who would be inclined to subsidize any efforts in the direction of preserving the places you mention? In certain other districts where the Government have been approached to secure places of interest they have done so on condition that some contribution towards the expense was made by the people in the district, and in several cases that has been agreed to?—We have not many wealthy people here who could put down their cheques for £1,000. It is not a common practice here, but I am sure an appeal to the public generally would be responded to to some extent. I would back my feeling with a small contribution. As to the Everett Road Reserve, some time ago Mr. Bakewell, a farmer living on that road, told me that efforts would be made to have the land there thrown open for settlement, and he was strongly opposed to it. I wish to represent his view on the matter to this Commission. He is an adjoining settler to the reserve.

3. *Dr. Cockayne.*] Is there a considerable quantity of land available for settlement in Taranaki still, and not yet occupied? Is this the last piece that can be settled?—Mr. Collis could perhaps answer that question.

4. *Mr. Collis:* There are large areas in the back country coming in, and in the back districts, if the settlers were to farm their land better, it would be a wiser policy than throwing open fresh areas of bush land for them.

CLEMENT WILLIAM GOVETT sworn and examined. (No. 67.)

1. *The Chairman.*] Will you please make a statement?—I am a solicitor, and have been in practice here about thirty-six years. At the present time it seems impossible to build small houses suitable for artisans and working-men except at a loss. I am of opinion that to build houses which will not pay at least 8 per cent. on the cost of the building and 5 per cent. on the cost of the land may be philanthropic, but from a business point of view it is madness. I have endeavoured by means of correspondence in the local papers and by interviews with builders and carpenters to endeavour to find out how the object I have in view can be attained, and I thought perhaps that something might be done by way of building houses to stock measurements, but I have been always told that houses cannot be built at the present time at a profit owing to the price of timber, which is notoriously rising in value every year. Under these circumstances it seems to me that with a scarcity of New Zealand timber it is the imperative duty of the Government for the time being of New Zealand to do everything in their power to encourage the importation of timber from every direction possible, and in order to do this to reduce or abolish altogether duties on imported timber. The present policy of endeavouring to stop the importation of foreign timber keeps up the price abnormally high, and encourages the destruction of timber, some of which has not properly matured, and also the cutting of timber at probably unsuitable times of the year when the sap is rising instead of falling. I have no special knowledge about timber, but my professional experience shows me that the houses which have been put up during the last few years will never last like the timber used in the houses built, say, more than thirty years ago. I have had for some twenty-five years a good deal of experience with regard to planting and growing native trees, and am at the present time Chairman of the Pukekura Park Board, one of the main objects of which is to grow native trees in the park. Though the young trees there are extremely well sheltered, and have every advantage, their slow growth shows that it would be quite hopeless ever to think of growing New Zealand trees for the sake of their timber when there are so many exotic trees which grow so much quicker and are also so much hardier. I say nothing about the evil climatic effects which are following the denudation of the forests, and the necessity of making large forest reserves (though I feel very strongly on this subject), as well as regards the loss of beauty.

2. Could you give the Commission the date when the gardens here were started?—No planting was done before 1876.

3. When were the large *Pinus insignis* planted?—About the end of 1876.

4. Is much building done here in concrete or brick?—Very little, for the reason there is such a great difficulty in regard to getting stone.

5. Is the timber used in the town locally grown or imported?—Lately there has been some importation of Oregon pine. Nearly all the timber used is New Zealand timber, but I cannot speak with certainty.

GEORGE HENRY BULLARD sworn and examined. (No. 68.)

1. *The Chairman.*] You are Commissioner of Crown Lands and Chief Surveyor for the Taranaki District?—Yes.

2. It has been alleged that the Everett Road Reserve is a hotbed for noxious weeds. Is that correct?—Probably you noticed at your inspection yesterday that the noxious weeds were chiefly on the road frontage and along the part of the reserve that had been run through by fire. We let a contract lately for clearing them. I cannot give the exact cost, but sometimes it amounts to about £20. That is the annual cost.

3. Are there many reserves in the district in the same position?—Yes, Pukerangiora Pa cost us lately £100 to clear of weeds. It is an historic spot on the Waitara River. I will supply a list of the reserves and cost of clearing the same.

4. Are there any climatic reserves in your district or Crown lands back in the ranges that could be set aside for climatic purposes?—We do as a rule reserve the very rough portions in the case of every block of Crown land opened up, but the pressure for settlement land is so great that we have to open every acre that is worth it. Taranaki is well off for reserves. Our policy is to reserve any portion of a block that we think too rough for profitable settlement. As to the quantity of Crown land left in Taranaki, at the beginning of last year there were 250,000 acres, but by the end of this year there will not be 150,000 acres left unalienated.

5. Is Native land being purchased here on behalf of the Government?—Very little Native land is left unalienated, and little is being bought. One or two blocks are left, but they have been leased, and we have no chance of getting them.

6. Have you any trouble in this province over the deer?—No. But we have trouble through settlers putting their cattle into the reserves during the winter. We find it hard to get a conviction against them. We tried, and were advised that all we could do was to impound the cattle. The trouble has been very bad in the Egmont National Park.

7. I understand there are very few timber-mills in this province?—Very few. The Taranaki bush does not carry a large amount of milling-timber to the acre. I had an assessment made of some bush on land at Mangapehe before the land was opened for settlement, and on 1,000 acres the assessment only came to 820 ft. to the acre, and on 200 acres to 6,500 ft. to the acre. On a 1,200-acre reserve there was roughly about 7,000,000 ft. of timber. We borrow the timber expert of the Wellington District for work of that kind.

8. When the timber is sold is it disposed of according to the schedule rates of royalty under the regulations?—Yes; but I have had it pointed out to me lately that these are the minimum royalties, and the Department prefers the timber being put up to auction. We have so little that we have not done so yet, but in one case we will auction it.

9. You also have had experience in the Gisborne district?—Not much in the bush. There is very little Crown land there carrying timber, but even there pressure was brought to bear to throw it open for settlement. At Motu we did keep back several thousand acres that had *Fagus* in it.

10. Is that timber milled there?—They tried some for sleepers and fencing, but it warps badly. It is used in Reefton for mining props, studs, and joists. I have never seen it used for furniture.

11. Have you reported on preserving the bush at Mokau?—Lately I was asked to report in detail on the scenic reserves there. A proposal has been made to exchange part of the Crown lands along the bank of the river for a scenic reserve.

12. *Mr. Lethbridge.*] Would it not be better to buy the land right out?—I have told the Government that as far as the land above the mines is concerned I would not have it for pastoral purposes even if they gave it to me. I do not put any value on the scenic reserves. It would be a great pity to fell the bush on the land I refer to, because the land would then only slip into the river. Some of the bush will have to be destroyed to give road access if the land is ever settled.

13. *Dr. Cockayne.*] If this country is so rough that it cannot be settled, how can it be of any value?—A lot is of no value, but there is some good land.

14. In estimating your timber do you take tawa into account?—No.

15. Are there any areas of tawa country which are of little value for farming purposes?—There would be a certain amount, but a lot of our country is so very rough that I question whether you could mill the timber properly for butter-box purposes.

16. Could it be kept for future milling when the white-pine is cut out?—Not in the country we have left in Taranaki.

17. *Mr. Clarke.*] What building-timbers have you?—Chiefly rimu, and a little matai and totara.

18. How much of the remaining 150,000 acres of Crown land contains milling-timber?—I could not tell you. But I gather there is very little good milling-timber in the district now.

19. Do the millers get their supplies from the King-country?—The milling is chiefly done on the Auckland side. Part of the King-country is in my district.

20. *Mr. Murdoch.*] Is it desirable that that long, narrow strip of reserve at Everett's Road should be kept?—There is a good deal of the original bush there.

21. It seems all second growth?—Yes, but it is the native second growth coming back again. The original bush was trampled out by cattle.

22. Seeing it is such a long, narrow piece, and that the residents are doubtful about its being retained, would it be wise to continue it as a reserve?—I suggested not long ago we should cut out the part which has been burnt. Some of our reserves are costing a lot of money for upkeep, and the financial burden is rather great accordingly.

23. *Mr. Lethbridge.*] What is that land worth if opened for settlement?—£4 to £5 an acre; at any rate, £3 10s.

24. *Mr. Murdoch.*] We were told that it would fetch £30?—That would be cleared and grassed; but they would not get that in the bush. They would realize on the timber first. The land alongside only runs to £20 an acre. £30 would mean stumping and clearing, a work of many years.

25. *Dr. Cockayne.*] Does not a good deal of the Wanganui River have a frontage to Taranaki?—One side is our boundary as far as Pipiriki.

26. A good deal of the river-front is not reserved?—There are Native blocks fronting the river in one or two cases, and a number have been surveyed for scenic reserve purposes.

27. But it is not yet acquired?—It is not gazetted yet.

28. Could the Maoris lease that land?—Some has been leased.

29. Could they lease in the meantime to outsiders the portion you have surveyed and recommended as a reserve?—I suppose they could.

30. *Mr. Lethbridge.*] Do you not issue a Proclamation?—In some cases they have leased it because no Proclamation has been issued.

31. *Dr. Cockayne.*] Then the land recommended for scenic purposes is in the same position as unsurveyed land?—Yes. Some of it has been gazetted, and we are negotiating for an exchange respecting some scenic reserves proposed to be taken in the Kohuroa Block.

32. *The Chairman.*] In such a waterway as the Wanganui River, where land suitable for settlement abuts on the river, do you not think it would be as well to allow that land to be settled to afford a contrast to tourists coming down the river from Taumarunui, to whom otherwise the scenery might get a little wearisome?—I think so. Too much stress can be laid on reserving a lot of the bush along the river, as some amount of civilization does afford a relief. It would be unwise to fell any bush on the steeper slopes of the Wanganui and Mokau Rivers, as it would be detrimental to their navigation to do so.

JOHN JOHNSTON sworn and examined. (No. 69.)

1. *The Chairman.*] Kindly tell us your position?—I am the Dairy-produce Grader at the port of New Plymouth.

2. From where do the butter-factories here obtain their timber for butter-boxes?—From locally grown timber, principally from the Main Trunk line.

3. Have the Dairy Association a mill there?—Yes.

4. Have any experiments been made here with other timbers than white-pine for butter-boxes?—Not in Taranaki. In Wellington an experiment was made with *Pinus insignis*, and it turned out very well.

5. Was the timber treated in any way?—No, just the plain timber, well seasoned.

6. With the butter-boxes used here is any preparation placed on the white-pine?—No.

7. In Otago and Auckland evidence was given that the white-pine was first paraffined. Is that done here?—No. That is the system followed in Otago and Auckland, but I do not think it has any value. The parchment paper, used properly, is quite sufficient. Nothing is gained by paraffining.

8. In the experiment in Wellington was the parchment paper used?—Yes. I had the box opened at the Palmerston Show three years ago. The butter had been in the box about three months, and it was of good quality. Tawa timber has been used for years for casks, but casks are not very satisfactory for butter exporting and storing.

9. Has poplar timber been tried?—I do not know.

10. *Dr. Cockayne.*] We were informed in Auckland by Mr. Thornton that if parchment paper was used for lining butter-boxes almost any timber would do. What is your opinion?—I think that would be correct, providing the parchment paper was of good quality; but at present we have a lot of inferior parchment paper, which becomes soft like blotting-paper, and it is damaging the butter.

11. Have you had any experience of butter-boxes made of paper-pulp?—I have seen the boxes here, but not used them or tested them. I should think they would be quite suitable if of reasonable cost.

12. Can we do without the white-pine if we can find somthing else to take its place?—You might have to use more lining to keep the wood from the butter, and it would be more costly. I do not consider it absolutely necessary to have the butter-box made in one piece of timber, as in the past.

13. *Mr. Clarke.*] With regard to white-pine timber, in the interests of the dairy industry do you think it advisable to prohibit its exportation—I should say Yes

14. *Dr. Cockayne.*] Even supposing the white-pine forests were standing on land which for the production of butter-fat was much more valuable than holding it for milling the forest?—I understood the supply of timber was rather on the short side.

Henry Okey, M.P., examined. (No. 70.)

1. *The Chairman.*] You wish to refer to a certain reserve, I think?—Yes, the Everett Road Reserve. It is in Mr. Hine's electorate, but some settlers have asked me to inform the Commission that they wish the reserve sold, and the land brought under settlement; otherwise it is going to be a nuisance to the district on account of the spread of blackberry. It is a costly matter to clear it, and as a reserve they do not consider it is required. Roads have to be maintained by the settlers, and if the reserve were brought under grass the land would be rated, and the rates would go towards the upkeep of the roads. There is no objection locally to the reservation being uplifted.

Charles Ahier sworn and examined. (No. 71.)

1. *The Chairman.*] What is your position?—I am a timber-merchant here, and may be able to give you some information as to the timber-supply of this district. The only Taranaki mill I know of is one owned by Mr. Symons. It is at the foot of the mountain, and turns out from 80,000 ft. to 100,000 ft. per month. Another mill on the Egmont Road, near Inglewood, is not turning out more than half that quantity. There is plenty of timber in Taranaki, but not handy enough to a railway to make it profitable to work. Until the railway is running between Opunake and New Plymouth, around the coast, where there is a good deal of timber, the latter supply will not be worked. Our supplies come from the Main Trunk, but it is very inferior timber to what we have formerly received in Taranaki, which produced the best rimu in New Zealand.

2. Is the timber at Opunake a red-pine forest—Yes.

3. Is there a large quantity of it?—A great deal.

4. On Crown or private land?—I cannot say. We also get supplies from Mokau, a good class of timber. We import a considerable quantity of Oregon pine.

5. What price per hundred is good-quality rimu sold at here?—It averages according to quality from 15s. 6d. to 19s.

6. Do you utilize other timbers here, such as matai or tawa?—Tawa is not used for building. We have white-pine, but it is nearly all exhausted, until the railway is built.

7. Where is the white-pine growing?—It is mixed with the rimu.

8. What is the local price of white-pine?—I cannot land it in my yards under 11s. 8d. a hundred feet.

9. Do you do any manufacturing?—Yes, we have a large factory.

10. What can you supply butter-boxes at?—Until this year we have been supplying them at 1s. 3d., but next year we shall have to add a little extra and make it 1s. 4d. a box. There is always keen competition in New Plymouth, which keeps the price down. At the price I have quoted they are made at a loss.

11. Do you attribute the proposed increase to the supply of timber becoming scarcer?—Hardly. At Eltham there is a company of farmers who have bought up a line of white-pine bush up the Main Trunk line and erected a factory there. They are making butter-boxes for the farmers at cost price.

12. Are you personally acquainted with the bush that has been bought by the Egmont Box-factory?—No.

13. We saw a paragraph this morning stating that bush contained a fifty-years supply of white-pine for the whole Dominion. Is that correct?—I do not think there is any bush in the North Island with fifty years' supply of timber in it. I read the paragraph, and thought it was a matter of "blow."

14. Can you tell us the price of Oregon pine here?—We are retailing Oregon at anything between £1 and £1 5s. a hundred feet.

15. From a timber-merchant's point of view is it a satisfactory timber to deal with?—It is a much superior timber to the timber that comes from our Main Trunk line, the latter being full of sugar, which is what a worm lives on. The Taranaki red-pine is very hearty timber, and when dried there is very little chance of the worm getting into it.

16. Do you think the time of the year the timber is cut has anything to do with its softness?—No. I have read of such being the case, but my experience of a lifetime indicates there is nothing in the contention. It would never do to close the mills so many months in the year, and only carry on operations at the time deemed proper for cutting the timber.

17. Has *Pinus insignis* ever been milled here?—No.

18. I suppose you know a good deal is used in Canterbury now?—So I hear, and also in the Bay of Islands. I have not much faith in *Pinus insignis* as a timber for building purposes. The reason our houses decay so quickly now I attribute to painting them too soon after erection. If the paint were kept off a house for two or three years and plenty of time allowed for evaporation the house would last one-third of the time longer. Fifty years ago I built a house in the Waikato of white-pine, and it was left unpainted for seven years on account of the difficulty of obtaining white-lead and oil. It was afterwards painted. I saw it eight years ago, and it was in splendid preservation. I never send out timber for joinery unless it has been in my yard two years for seasoning. The fault in the past has been that the timber is put into a house too soon after being cut.

19. *Mr. Lethbridge.*] You say the insects attack the wood for the sugar. Are you aware that the powellizing process is to put sugar into the wood?—No. I object to that process, because I think you injure the timber if you dry it too quickly. Timber must be dried naturally.

20. Do you object to powellized timber?—That is my view of it. Last month I sent away over 50,000 ft. of timber I have had in my yard over ten years, and the buyers are satisfied it will make good joinery. I have not the slightest doubt that it is the sugar in the wood that attracts the worm.

21. *Dr. Cockayne.*] Have you considered that the sugar contained in growing timbers differs at different seasons of the year?—The sap rises and falls, and no doubt sugar is contained in the sap, and there is a certain amount of rise and fall of the sap at different periods of the year; but it would be impossible to carry on this business so as to arrange to fell trees at certain times of the year only. I have never seen a comparison between timber felled in December and that felled in June. I think there is very little in the argument.

22. *Mr. Clarke.*] You agree that the duration of the timber-supply in Taranaki is very short?—Yes.

23. Do you consider it a matter of importance that some scheme of replanting should be carried out at an early date?—At my age I do not think that I should trouble much about the next generation. As soon as the timber is exhausted the generation affected will find a substitute, and they are doing so now. The day is not far distant when all the houses will be built of concrete, even to the doors and sashes. The joists will be of reinforced concrete, and the walls.

24. Do you consider that it would be better to provide the material we know all about rather than trust to a substitute that may not eventuate?—I think our land is better turning out butter than growing trees for a generation that may not want them.

25. Supposing we have land that is not suitable for growing butter-fat, would it not be better to plant those areas in timber?—I find that good timber grows on good land. At one time it was remarked in Auckland that the gum lands were miserable country to farm, but to-day that land is producing butter that is putting Taranaki in the shade. I hear people remark on the wholesale slaughter of timber in this country, and I should regret it also as a timber-dealer; but I do not, because as far as our trade is concerned we owe more to butter than we do to standing timber.

26. At the same time you must admit we must have timber for butter-boxes?—There are already half a dozen substitutes.

27. Mostly made of wood-pulp?—No.

WELLINGTON, THURSDAY, 15TH MAY, 1913.

KENNETH WARING DALRYMPLE sworn and examined. (No. 72.)

1. *The Chairman.*] What is your occupation?—I am a farmer, residing at Rangitikei.

2. What matter do wish to mention?—There is a large block of country from Turakina down to Rangitikei belonging to the Government, but at present leased to neighbouring landowners. It is a part of the national endowment, but is practically one-third worthless now, and, with the exception of one man, the holders are willing to allow the Government to take and plant one-third of this block without asking for any reduction of their rent. The land is held on the condition that it can be resumed on twelve months' notice without compensation. The block consists of 8,000 acres. The part resumed would have to be planted with marram-grass first, and I suggest that the area along the coast should be taken in hand first in order

to obtain the necessary shelter for the rest. There is a block of 6,000 acres across the river belonging to Mr. McKelvie, who is, I understand, prepared to deal with it in the same way. If the Government agree to plant the block I first referred to, the owners stipulate that the rabbits must be kept down, and that no lupin be planted, as it is apt to spread. As to planting building-timbers, possibly you have had evidence that the quantity of softer or inferior timbers that will be wanted in the future is likely to increase very much, and also for the butter, cheese, and fruit industries. For this purpose *Pinus insignis* seems the most suitable, as it grows very quickly, within twenty-five years yielding a certain amount of millable timber. Inland of the district I mention gums grow well, and would prove generally more payable and useful than the soft woods.

3. What is the average width of the belt of sandy country you refer to?—About half a mile.

4. What rentals are the holders of the leases paying?—Very small rentals. McKelvie's lease of 6,300 acres carries with it a rent of £132 10s. a year. One I am interested in, of 1,818 acres, involves a rent of £31 per annum. In the case of a lease of 3,500 acres, farther up the coast, the rental is £59 per annum.

5. In the event of the Government deciding to plant these dunes would it be necessary to erect fences to keep the stock off?—Yes, but the marram-grass could be planted in the meantime, as the stock would not interfere with it.

6. Are there any rabbits on the sand-dunes now?—Practically none, but they would go there if marram-grass were planted.

7. Are they very bad on what might be termed the mainland portion?—Not very plentiful, but still they are always there, and there is a liability for them to increase.

8. Do the runholders keep them down?—Yes, by poisoning and killing generally.

9. Have you made any personal experiments in reclaiming sand-dune areas?—In a very small way I have planted some marram-grass, and it has taken very well. I tried sowing *Pinus maritima* seed on the marram-gras, but no result followed. I planted *Pinus muricata*, also a few natives, but they died.

10. Did you meet with any success?—No; the sand seemed to kill everything.

11. What area did you plant in marram-grass?—7 or 8 acres, and after nine years it is still growing well.

12. It prevented the spread of the sand?—Quite.

13. *Mr. Lethbridge.*] Do you know of any plantations on private land along that coast?—There are none very close to the coast, but there is one at Heaton Park, inland from one of the runs I have mentioned. It has in it a good many pines, which have been planted twelve or fifteen years. I recommend the Commission to visit the place and note the growth of these pines on the bare sand. The owner is Mr. J. Simpson. The plantation is six miles from the sea.

14. *The Chairman.*] In regard to the offer the landholders are prepared to make in respect to tree-planting, has there been any meeting authorizing you to speak on their behalf?—I wrote to and saw them all, excepting one man named Wilson, who owns land in the centre of the sand-dune block. He seemed not quite certain as to what view he would take, but I think he would fall in with the others. He was afraid of rabbits spreading over his place from the proposed plantations. His run is numbered 18 and 19.

15. *Dr. Cockayne.*] Has the Heaton Park Estate done much planting?—Yes, on the inside of the sandhills. I wish to add that the area I refer to is going back rapidly, the quantity of feed there is falling off, and if something is not done to check the sand-drift it will become entirely valueless.

16. Is the sand going farther inland?—Not much, because its spread was stopped by the marram-grass.

17. *Mr. Murdoch.*] If the area were planted what opportunity is there of getting the timber to the market?—The railway-line is near.

WELLINGTON, FRIDAY, 16TH MAY, 1913.

WILLIAM HENRY BENNETT sworn and examined. (No. 73.)

1. *The Chairman.*] What matter do you wish to bring forward?—I am a builder and contractor, and chairman of the executive of the New Zealand Builders' Association. For a number of years our federation have had the matter of the future timber-supplies of the Dominion under their earnest consideration, and the matter was brought to a head last year in a memorial to the Government setting forth our views on the subject. I beg to hand a copy of that petition to the Commission.

2. I take it that this pamphlet sets forth fully the opinions of the federation on the question?—Yes, and it is not necessary for me to add anything to it.

3. Is there any marked shortage in the timber-supplies of this district?—Yes; within the last month or two certain classes of building-timber have advanced very much in price. For O.T.G. heart-of-rimu lining, 4 in. and 6 in. by $\frac{5}{8}$ in., the quotation is £1 5s. and £1 6s. per hundred feet superficial. That is a large increase, and the excuse is that heart timber is very difficult to get, and it is very largely sought after for joinery purposes and general inside finishing-work. O.B. timber has also risen slightly. It has been urged that foreign timbers should be admitted free of duty in order to help the local supplies out, and the fear was expressed that the market would be swamped with Oregon pine; that fear has not been borne out by facts. To-day we are paying £1 1s. per hundred feet for Oregon in lengths

up to 20 ft., by 12 in. in width. For sizes beyond that the price rises 6d. per hundred feet, which makes Oregon a very expensive timber; so that the fear of its swamping the market has not been justified. I think our own timber-supplies should be conserved for our own use, if possible, as we consider that we have not more than from thirty-five to forty years' supply of timber in the Dominion according to our present rate of consumption. On the basis of an increased rate of consumption the position becomes more serious still. We are using up our supply and making no provision to take its place.

4. Are you not aware that the Government are planting certain areas?—Yes, something is being done, but in our opinion it is totally inadequate for the requirements of this country.

5. This Commission has to face the problem of growing timber in such a way that it will not cost £200 to produce £100 worth of timber. Have you any opinion to offer on that point?—I think there are many large blocks of waste land that are suitable for afforestation but not for any other purpose, and they should be dealt with in that way, and so made a valuable asset to the Dominion.

6. The cost of labour and the price of money make it a harder matter to grow timber economically in this country than in Europe?—I understand the difficulty. Have you considered the question of making it obligatory on the part of landowners to plant a certain area of their holding?

7. Whatever might be done in that respect in the future, I do not think the principle could be made retrospective. Settlers might be encouraged to plant trees on the remaining hilltops by the supply of trees at cost price. Would you support that proposal?—The benefit derived by the farming industry from tree-planting would compensate them for the loss of the small area that would be planted. The Government might encourage them to plant by imparting the necessary information as to the trees that should be used, or the seed that should be planted. But I would not urge that the farming industry should be subsidized by special grants or the remission of rates. I would oppose such a suggestion.

8. Is much foreign timber being imported into Wellington now?—Not very much. The only foreign timbers at all largely used here are Oregon pine and a few of the hardwoods for wharves and bridges.

9. Is much kauri used here?—No; we cannot get it.

10. I suppose you do not use the white-pine either?—No. I do not think my federation would urge that that timber should be conserved, for the reason that it grows on a class of land it does not pay to keep idle, and also in the forest it is mixed with other timbers like rimu, which you cannot mill without also destroying the white-pine.

11. Would your federation be in favour of means being adopted to prevent waste in the cutting of milling-timbers in our present forests?—The system followed in the Auckland Land District is the proper one, the timber being sold as it stands, and not allow the millers to cut the best only, destroying what they do not want.

12. When the Commission was at Taumarunui we inspected some automatic machinery for the utilization of the smaller pieces of timber which otherwise would be wasted, thus using up another 25 per cent. of the log. Have you seen that machinery?—No; but I have no doubt that if the work can be done economically it would help our timber-supplies to last out.

13. Have you had any experience in building in ferro-concrete?—As much as the average builder.

14. In that class of building you require a considerable amount of timber for moulds?—Yes.

15. I presume that timber used in that kind of construction need only be of a cheap and inferior class, a non-durable timber?—Certainly, as it could not be used more than twice. You can use the scantlings over and over again, but not the boards. An inferior class of timber would do.

15A. Such a timber as *Pinus insignis?*—Yes.

16. *Dr. Cockayne.*] Would not the knots spoil it?—It would scarcely do for the frame of a building where it has to bear a certain strain, but would probably answer for the timbering for ferro-concrete work. Going into that matter a little farther, as a rule where ferro-concrete is used we are pulling down the very small buildings and replacing them with large buildings. Therefore the timber required in connection with the larger building of ferro-concrete would be double the amount now used in the smaller building.

17. Of course, the larger building would have very much more accommodaiton?—Yes, in the case of business premises and offices. For dwellings I doubt if more accommodation is afforded in the new buildings, which are not very lofty.

18. If a small building is replaced by one in ferro-concrete in connection with which as much timber as there was in the smaller house is used, would not there be a *per capita* increase in the amount of timber consumed?—Possibly not, because an inferior class of timber would be used. In a ferro-concrete building the only timber that is used is round about the doors, frames, and windows, and the internal fittings, such as shelving and dado; but even in a ferro-concrete building people are doing away with all the timber they can in order to make the building fireproof.

19. How would the cost of a building in ferro-concrete compare with one in wood?—The ferro-concrete building would cost about 25 per cent. more than the other.

20. And the upkeep charges would be less?—Yes, both for maintenance and insurance.

21. The cost of painting would be very much less?—Yes, although even ferro-concrete buildings have to be attended to. They are not quite waterproof.

22. *Mr. Clarke.*] With regard to the last questions the inference is that in consequence of the new methods of construction less timber will be required, but is it not the fact that most of the ferro-concrete buildings are not dwellings, but stores and warehouses, where it would be

impossible to erect a wooden building sufficiently strong to take the weight required?—That is quite correct; in fact, in Wellington City I cannot point to more than about twelve ferro-concrete dwellinghouses, all the concrete work being in the business portion.

23. So that if these stores had to be constructed in wood they would spread over a large area, which would mean increased expense in the handling of merchandise?—That is so. But I would like to point out that in this city the building regulations provide that in certain areas you cannot use wood at all.

24. You are aware that certain authorities show clearly that notwithstanding the increase of substitutes for building purposes the quantity of timber used also shows an increase?—Yes. From our inquiry when memorializing the Government on the matter we found that in America, the home of ferro-concrete, although that composition has come into use very largely, still the consumption of timber has risen to a very great extent. It points to the fact that we need not expect much relief from ferro-concrete as a substitute for timber.

25. Do you not consider it would be better to provide amply for what is known to be a suitable building-timber rather than to attempt to rely on a substitute which may afford only a problematical relief?—Decidedly so, especially as far as this Dominion is concerned, because here timber will always be sought after as a building-material.

26. Certain questions were asked you relating to the cost of planting here and in other countries where labour and land are cheaper. Notwithstanding the cheapness of labour in other countries, is it not the fact that if we require timber from there we still have to pay a high price for the timber produced under what are supposed to be more favourable conditions?—That is so.

27. Is there any guarantee that New Zealand will get timber from those other places any cheaper on account of the favourable conditions supposed to be operating there?—There is no guarantee. In regard to Oregon pine, here we pay £1 1s. per hundred feet for it, but in Melbourne for the same sizes the price is only 16s. 6d. I cannot understand why there should be such a difference.

28. Perhaps it is due to certain methods of trade that are not practised here?—I do not know if the matter comes within the scope of this Commission, but if the merchants give evidence they might be asked about the matter.

29. *Mr. Murdoch.*] Regarding the milling of our timber, supposing the bushes were cleared out more thoroughly than at present, and more timber being consequently turned out, could a reasonably paying market be found for it?—I think so. That timber could not be much worse than we are getting now in many cases.

30. You think the millers are clearing the bushes out pretty well at present?—Yes.

31. Do you get much timber from the west coast of the South Island?—A good bit. I was on the west coast recently, and was informed that the timber grown there was sought after, as it was so much easier to work.

32. *Mr. Lethbridge.*] Did your committee ascertain information as to the best classes of timber suitable for New Zealand requirements?—No, because we only met in November last, and then found this Commission was going to be set up almost immediately. We thought it would possibly have better facilities for obtaining the information, so we deferred collecting it.

33. *The Chairman.*] In reply to Mr. Clarke you mentioned that your federation had gone into the question of increasing consumption of timber in America. Do you not think that a great deal of the increased consumption is due to the wood-pulping industry?—Possibly so. But it seems to me that it does not signify whether it is used for wood-pulping or for building purposes, as the timber has to be provided all the same, and it accentuates the necessity of making provision accordingly.

34. If the increase is due to the large use of timber in wood-pulping, and the same industry arose here, we would require to plant timber suitable for the purpose?—That would be so.

HARRY BORRER KIRK, M.A., sworn and examined. (No. 74.)

1. *The Chairman.*] I understand that you are Professor of Biology at Victoria College?—Yes.

2. Have you had any experience in connection with the microscopic examination of woods?—Yes, somewhat limited in scope, but exact as far as it went. What I sought was to determine the histological character of a number of New Zealand timbers, and I determined seven of them, but I never published the result.

3. Do you think if such an examination were made of all our New Zealand timbers it would serve a useful purpose?—It is difficult to say if it would serve an economic purpose, but it is quite likely that it would be of great scientific value. You know that the uconifers yield specific resins, and we get different compounds from different trees. That was not my work, but I thought there might be some histological constant that would go with the timber products, and so I carried on the investigation in conjunction with Professor Easterfield, and as far as I went I failed to find the constant. That is to say, trees that were most alike histologically yielded products that were quite different; while trees that yielded resins very much alike in connection with the small group I have mentioned showed different microscopic characters. Professor Easterfield did the chemical work, and I worked out the histological characters. Although I did not carry on the work far enough to be sure there was nothing in it, I carried it far enough to show that there was no immediate encouragement to be expected, and under pressure of other work I abandoned it for the time being.

4. The reason I ask you this question is not altogether from a scientific point of view, but from the practical standpoint. I will give an illustration: the Australian colonies admit our white-pine free of duty. Some timber was exported from one of our southern districts, but when it arrived in Australia the Customs authorities were not satisfied that it was white-pine,

but thought some other timber was being "run in" in its place. They sent a specimen of the timber over to New Zealand, and without a microscopical examination of the wood it was very difficult to determine whether it was white-pine or not. Therefore, the question is, if our woods had been properly examined by the microscope it could have been definitely stated at once whether the wood in question was the species it was claimed it belonged to. What is your opinion on that point?—As far as I know the species could be determined. I can certainly tell white-pine from any other timber I have examined.

5. Would it be a very expensive business to have our New Zealand woods examined microscopically, and the results tabulated?—It ought not to be an expensive matter, because there is certain equipment in the Colleges for the teaching of science which would suffice for the purpose. The only difficulty would be in collecting the best samples. That is to say, we should not only want samples of every timber, but samples from every possible locality, and of as many different ages as we could get.

6. If these samples were furnished to the University you think the authorities have the plant there to carry out the work?—An expenditure of £25 would be sufficient to secure a good plant to do all that would be wanted. But with regard to the question of a scholarship, that is another matter. I thought of proposing that this very question should be a subject for Government research this year, but I found, unfortunately, that although we have a qualified student available, the scholarship is considered to be awarded this year to a man who is already working, and so I am afraid that my chance of getting the matter taken up is likely to suffer, if not to disappear altogether.

7. What is the value of the scholarship in question?—£100 a year for two years, with a possible extension, and it is given to graduates in Honours.

8. Would it be a good thing if the Government awarded another scholarship that might go to a suitable student?—I think it would be.

9. Would any other University College in New Zealand have any one well qualified who could take up such a branch of work?—I do not know of any one, but it is quite likely.

10. With regard to the educational qualifications of young men seeking to enter the Forestry Department, are there the facilities in the University Colleges to-day to enable them to obtain the necessary scientific groundwork in such subjects as botany, zoology, meteorology, &c.?—A man can get a thoroughly good grounding in botany and zoology in our University Colleges, but we have no facilities at present for dealing with the economic aspect of any subject. I think I can express the position by saying that we are qualified to teach botany, but not to teach any technical application of botany, the staff being inadequate for such a purpose.

11. You are referring now to the Victoria College?—The same remark applies to every other College in the Dominion, the staffs being inadequate to take up such work. There is a further limitation that applies to Wellington particularly: we are handicapped by the large majority of our students being night students, which means that they can only come to us for four or five hours at the end of the day, and we have to get them to do work we consider ought to be done by a man fit to take a degree. That leaves little time for special work.

12. Considering the importance of the question of forestry to New Zealand, do you think it would be well if one of the Colleges should specialize in that branch?—Undoubtedly I do. I do not know whether any mention has been made to the Commission of the fact that Auckland University College is now about to appoint a Professor of Biology. It has been suggested in that connection that they should appoint a Professor of Botany, and, of course, a man up to date. It seems to me quite possible that they could appoint a Professor of Botany who could take forestry, and give him a lecturer. That would be a good foundation to start on. There is no Professor of Botany in New Zealand; but the men who teach botany have also to teach zoology, two subjects of enormous range, and for a man to keep up to date in botany, with zoology added, makes it impossible for him to take up the technical branches of the same science.

13. Have you had any experience with regard to the treatment of timber by means of preservatives—either the creosoting or the powellizing process?—I have seen many samples of powellized timbers, and have co-operated in experiments. They have not gone far enough to be exhaustive, but I do not think they tended to complete confidence in the powellizing process. Of course, one often sees much fungoid or bacterial growth on timber of that kind.

14. Have you experimented in regard to the creosoting process?—I have never tried it, but I have examined creosoted samples of timber whenever I have had the opportunity.

15. *Dr. Cockayne.*] Would it surprise you to hear that we saw on some powellized timber at Invercargill the finest crop of a species of mould that any one could ever see?—I have seen a crop on powellized timber. I am inclined to think fungi would not get inside the timber for a long time.

16. Before a man can learn economic botany he must understand the preliminaries of science. Cannot they be perfectly well taught at Victoria College?—It depends on the student. If he is up to university standing then we can teach him; but one of the difficulties in connection with men from an expert department is that they sometimes have a limited secondary-school education, and so find it difficult to assimilate the ideas readily that can easily be done in the case of men with moderately good secondary-school training.

17. Do you think a man who has the ability to enable him to take a high position as a forester should be able to grasp the principles of elementary botany such as are required for the B.A. degree?—Undoubtedly I do.

18. *Mr. Murdoch.*] In the course of your experiments with the powellized timber you found that the liquid had not penetrated very far?—It seemed to me that it had not.

19. I thought from what I saw that the liquid only penetrates a quarter of an inch. What is your opinion?—Probably less than one-quarter of an inch, except with the grain. In the case of the timbers I saw I do not think the liquid had penetrated to a greater depth than that. The timber was all quite green.

20. That being so, what would be the result in the case of hardwood as street blocking?—The powellized portion of the wood would wear out presently, and there would be left exposed the untreated timber.

THOMAS HARCOURT VALINTINE, M.R.C.S., D.P.H., sworn and examined. (No. 75.)

1. *The Chairman.*] You are the Inspector-General of Hospitals and Chief Health Officer?—Yes.

2. Do you wish to tender evidence regarding the employment of consumptives at tree-planting camps?—Yes. I would like you to consider the possibility of employing those consumptives who are practically cured of the disease, but not sufficiently to permit of their going back to their ordinary occupations involving sedentary lives and confinement in offices.

3. On what basis would you propose that they should be employed—on piecework? That is to say, if it costs 12s. 6d. a thousand to dig the pits for the trees would you pay the consumptives at the same rate?—Certainly. Mr. Goudie, who is present, can speak, of course, with much more authority on the point than I. We used to pay 9d. an hour in the case of consumptives doing that class of work. If they were put on contract work it should be at the rate of so-much for digging a certain number of holes.

4. Here we are faced with the question of paying for the labour, as a rule; the interest charge on the money invested is heavier than in Continental countries. If we place forestry matters on a proper basis we could not recommend anything in the shape of charitable aid, and we have to arrange regarding the employment of consumptives on a basis of paying for their services. We wish to ascertain what would be a fair sum to pay. Have you any opinion on that point?—I quite understand your position. The labour of consumptives cannot be regarded as reliable labour; but tree-planting is an occupation which particularly lends itself to the treatment of consumptives, and therefore any increased cost in connection with tree-planting I would suggest might be supplemented by assistance from the various Hospital Boards. Otherwise it would not be fair. You cannot look at this question from a business point of view; but it is just the employment that is wanted in the interests of the country, and of these people in particular.

5. Can you give the Commission any idea as to what number of men would be available if it were decided to employ consumptives in tree-planting?—I reckon there are about two thousand consumptives in the Dominion at present—males and females—and I consider that employment should be found for from one hundred and fifty to two hundred a year. That number would be available. As soon as we get the sanatoria into working-order it would be found that there would be a sufficient number discharged to allow of that number being available.

6. Has not your Department a large area of land at Kihikihi which it is breaking in now?—Not my Department, but the Mental Hospitals Department. But that land would be very suitable for the purpose.

7. Seeing that the subject is somewhat allied in connection with the two Departments, do you not think it would be possible to find employment for these people in that locality?—It is quite possible.

8. Then they would be able to obtain medical attendance if wanted?—It would be a way out of a difficulty. I believe one of my officers has reported on the advisability of land at Taupo being used; but that is too far from the railway. Kihikihi is admirably situated in that respect, being close to the line.

9. *Mr. Lethbridge.*] Then it would not be the Forestry Department that would employ them there?—I admit that the proposal to employ them at proper tree-planting camps would be the best for afforestation purposes.

10. *The Chairman.*] In the event of such camp as you contemplate being established in connection with the Forestry Department, what arrangements would be made in respect to medical attendance?—The cases would have to be carefully drafted in the first place from the various consumptive sanatoria. The idea is that only those practically cured of a disease, but not sufficiently to allow them to go back to ordinary occupations, would be drafted out, and there should be little risk of those cases breaking down again. At the same time you have to consider that contingency, and therefore it would not do for these camps to be too far removed from medical assistance.

11. How would the cooking arrangements be carried out?—That would be done by the men themselves. We have tried the experiment already at Rotorua, and spent in three years about £2,400 on a camp there, but at first it was not a success, because a matron was put in charge, and the patients used to go to her if they did not feel well or inclined to work. Therefore Mr. Goudie was greatly handicapped in regard to knowing how many men would be available. In fact, the camp was more of a hospital than a tree-planting camp. I altered the arrangement and put the camp under Mr. Goudie, and then it was in no sense a hospital. There was no nurse there, and it was much easier for Mr. Goudie to carry on.

12. How were the men supervised?—There was a foreman appointed from amongst the patients.

13. Had they the requisite knowledge to enable them to instruct the others?—They had no special knowledge excepting what they obtained by working under Mr. Goudie. These men were appointed specially to look after the camp and generally manage it for the Department.

14. Was there any return for the expenditure at Rotorua?—The only return was the number of trees they planted, and the fact that the men were kept employed, and isolated from the rest of the community, during the time that they might have been to a certain degree infectious.

15. Was the work they did credited to your Department?—No. They were paid direct from the Forestry Division.

16. How many men were there in the camp?—The number varied from eight or nine to twenty-two.

17. *Mr. Murdoch.*] Dr. Makgill estimated we could rely on sixty patients. I suppose he referred to the Auckland District only?—Yes.

18. *The Chairman.*] If the net cost to your Department was about £800 a year and there was an average of twenty-five men employed, it cost about £32 for each man independently of

what he earned?—It cost about 2s. 8d. a day for each consumptive employed for the expenses of the camp.

19. Was the amount of their keep deducted from what they earned?—Yes. The manager used to work it out and then it was deducted from their earnings.

20. Did your Department not get anything back?—Just the working-expenses of the camp. We paid the wages and the men found themselves.

21. *Mr. Murdoch.*] As Taupo is a very suitable place for tree-planting and where consumptives could be employed with advantage, in the event of operations being started there would your Department erect the camp?—I think there is every possibility that the Government would erect the camp.

22. If these men were employed for a couple of years could they afterwards return to their ordinary labour?—Some should be able to return long before two years had elapsed.

23. *Dr. Cockayne.*] Are you forced to find employment for convalescent consumptives?—No; but it is the best form of employment for them.

24. Would Central Otago, where there might be considerable planting in the future, be a suitable place for them?—Certain parts of it would be.

25. Possibly better than anywhere else?—I would not say that; but there are certain districts in Central Otago that would be extremely good places, such as the high land about Cromwell.

26. *Mr. Lethbridge.*] Would not the dust there be too much for them?—I do not think so.

27. It is very bad there?—Then the dust would be bad. Is it dusty on the high land there? I would not propose to establish a camp on the plains where it is dusty; but between Cromwell and Queenstown you would not get much dust on the hills. I was thinking of the high lands, and not that there would be any planting on the plains.

AUGUSTUS HAMILTON sworn and examined. (No. 76.)

1. *The Chairman.*] I understand you are the Director of the Dominion Museum?—Yes.

2. Do you wish to tender any evidence?—Yes, on the effects of the removal of forests, on denudation generally, and kindred matters. On behalf of the Philosophical Society I wish to express our sympathy with any steps that can be taken in the way of restraining the effects of denudation, and for preserving the climatic reserves on the high ranges. The society presented a petition to the Prime Minister, and I believe it was passed on to the Commission, on the subject of the National Park. Professor Easterfield, the president of the society, was appointed, with myself, to wait on the Minister on the question, and the professor would have been here this morning but was unable to get away. He would have supported the prayer of that petition. I now wish to support the recommendations of the society, and also of other societies throughout New Zealand, in favour of the extension of the areas of the National Park.

3. Are the deer, as far as your knowledge goes, damaging the climatic reserves in this district?—I think not. They may damage the undergrowth, but I have no special evidence to offer to that effect.

4. In the event of the deer eating out the undergrowth and preventing natural regeneration would it not tend in time to the destruction of those reserves?—Certainly it impairs the usefulness of the forests and retards the growth.

5. With consequent greater liability to fire?—That is so.

6. Are you aware if the deer are barking the trees here at all?—No. I have no doubt that deer, like all ruminants, would chew the bark of the native trees, the same as they chew the willows.

7. Are you of opinion that the deer, instead of being allowed to roam all through our national parks, should be restricted to certain deer-preserves, and destroyed if they come outside those preserves?—That is a matter that requires some consideration, because I have not any evidence to indicate that the deer are harmful in their habits.

8. Here are some photos showing trees at Hanmer which have been badly damaged by deer. After seeing these photos do you think the deer should have the full run of our forests?—If it is a birch bush where these photos were taken, then no doubt the deer appear to be very destructive to some trees, and it becomes a question of whether we are going to have deer or trees.

9. And we shall have the country ruined by the denudation of the hills?—Certainly; much more damage will be done by floods due to the denudation of the forests than good will be done by the presence of the deer.

10. *Dr. Cockayne.*] Do you know the Tongariro National Park?—Yes.

11. Are you aware that within the area of the present boundaries there is virtually not a single tree?—There are no trees within certain limits.

12. You wish to see the upland forest on Ruapehu brought into the park?—Certainly.

13. Do you think the area of this park should be extended as far as the railway-line and Hauhungatahi?—I certainly think it should extend as far as the railway-line, but I am not quite certain about the lay of the country there.

14. What other societies have supported yours in endeavouring to get the National Park extended?—As far as I am aware most of the societies replied favourably to our circular asking their support.

15. The proposal is a necessary one because of the source of the Wanganui River being there?—Yes, its principal source is in that park, and certainly the preservation of the forest would tend to maintain high water in that river, thereby benefiting the river traffic.

16. In additon to the area forming a splendid national park, it is also of the greatest importance as a climatic reserve?—Certainly.

ALFRED KINGCOME NEWMAN, M.P., sworn and examined. (No. 77.)

1. *The Chairman.*] What matter do you wish to mention?—When I was in Parliament on a former occasion I asked that the district around Ruapehu, Tongariro, and Ngaruhoe should be formed into a national park, and Mr. Ballance adopted the suggestion. The Philosophical and other societies have petitioned the Prime Minister to extend the boundaries of this park, and I understand the matter has been referred to this Commission. I visited the park last year, and it is of very considerable importance that the area should be enlarged. Unfortunately there are a number of rabbits getting in, and they are gradually eating out the herbage. The park is also the watershed of a large number of streams, the Wanganui River amongst them, and if the forest is removed the rivers will be disastrously affected, and perhaps the low-lying country will be subjected to floods. On the northern slopes of the park are some of the finest hot springs in New Zealand, and I am exceedingly anxious that the land where these springs are situated should be acquired by the Government for the benefit of the people of Wellington and the Dominion generally. There is a small Native reserve on the slopes of Tongariro at Ketetahi and Te Mari, and I have asked the Native Minister to purchase the Ketetahi springs. He told me he would negotiate for them. They would then be included within the boundaries of the park, and that is an additional reason why the area should be extended. A lot of the land proposed to be included is very poor country, and if it were turned into sheep-runs it would carry very few sheep. The railway is now running near the park, and we have around those mountains a very fine reserve which will be in time a playground for the people of Wellington. Hitherto it has been very inaccessible, but there are two or three roads leading into it, and if the Government will bridge three or four of the big creeks the Ketetahi hot springs will be brought within easy distance of this city. The nearest part of the park is within ten miles of the railway, and the principal necessity is that all the land down to the railway should be included in the park, as it is of very little value for settlement.

2. A portion of the land you advocate should be included in the park is, I understand, private land?—No; most of it is Crown land. On the eastern side of Ruapehu and Tongariro there are Native leases—forty-two years—held in huge blocks, and I believe that the owners are willing to surrender. The result has been that these people have held too much land, and it is all going back to the wilderness and to noxious weeds.

3. Have you any suggestions to make as to dealing with the rabbits in the park?—The work is being done with so few rabbiters that it is not being well done. The rabbits are exterminating the native flora, and more money should be spent in keeping them down. Of course, the flora is of vital importance to the usefulness of the park. It is quite clear that without my suggestion this Commission has power to recommend the Government to largely extend the boundaries of the park, and I hope you will do so.

4. Have you observed if any damage is being done to the climatic reserves by deer?—I know nothing about that matter, not being interested in the question of the deer.

5. *Mr. Clarke.*] Do you propose that the whole of the forest-area from the Waimarino end to Waiouru should be included in the reservation?—Some of the bush might be milled and some preserved. The bush that is cut may grow again, but at present denudation is going on rapidly in regard, not to the big trees, but the small flora. I think the reservation should go round from the railway-station at Ohakune and on to Waimarino, and so preserve the scenery for passengers by the Main Trunk line.

6. *Dr. Cockayne.*] You know that within the present boundaries of the park there is not a single tree, the boundaries being so high up the forest is excluded. Is not that so?—Yes; that is why I am here to-day—to get it included.

7. Have you seen the map Mr. Phillips Turner prepared of the proposed extensions suggested some years ago?—Yes.

8. Do you not think, even if you leave Ohakune out, where there is a good deal of milling-timber, that the whole of Hauhungatahi should be taken in?—Yes.

9. Because there is there a piece of forest that comes down close to the Waimarino Plain?—I quite agree. I think the two big canyons at Makinokau and Te Whero, with the trees on either side, should be preserved. I might say that there is an extraordinarily large number of rabbits in that area, principally of a black colour, and it is advisable that steps be taken to keep them down.

10. There were some deer turned loose around the mountain hut on Ruapehu, and they will certainly damage the indigenous plants. Should they not be cleared out of the park?—Undoubtedly they should. I think some were killed. The deer and rabbits both should go.

11. *Mr. Lethbridge.*] Do you know if the piece of freehold land from near Ohakune and right up the mountain has been acquired by the Government?—No. The Government have bought a lot, but I have not seen the recent plans. The plains I refer to would be included in what I want reserved.

12. Do you not think it would assist in preserving the park if some of the lower ranges were afforested?—Undoubtedly it would.

13. You think it would be wise if some afforestation were to be undertaken on the plains referred to?—Yes. I would propose to employ some of the prison labour in afforesting a lot of that country.

14. *Dr. Cockayne.*] In the bush at Hauhungatahi I understand there is very little milling-timber?—Very little. It is covered with a stunted bush in which the mutton-birds nest. The time has now come when the boundaries of this National Park should be enlarged and finally fixed.

HALBERT ALEXANDER GOUDIE sworn and examined. (No. 78.)

1. *The Chairman.*] You are the Superintending Nurseryman for the Government for the North Island?—Yes. I am under the Lands Department.

2. Do you consider that the present system of employing prison labour in tree-planting operations under the Forestry Branch is satisfactory?—It has been satisfactory on the whole, but during the last three years the supply of prisoners has gone down.

3. What was the average number employed in your district during the past year?—Speaking from memory, I think there were eleven at Whakarewarewa and twenty-six at Waiotapu. I will supply the actual figures.

4. How is the prisoners' labour estimated?—We put a value on it according to what it would cost to do similar work by free labour. Clearing the land costs £1 an acre by free labour. By prison labour it would not be valued at all. The cost of pitting and planting is treated in the same manner.

5. When you make up your accounts is the Prisons Department credited with the value of the labour done by the prisoners?—I do not think so. The total expenditure shown in the 1912 returns does not include the cost of the prison labour, but in order not to allow the southern plantations that do not employ prison labour to compare too unfavourably with our plantations in the north we have included the prison labour in calculations.

6. In the event of the afforestation operations being very much extended I suppose you could not count on receiving a much greater supply of prison labour?—It appears likely that we cannot; but I do not know the views of the Prisons Department on the subject.

7. Has any application been made to the Prisons Department for further men?—I understand they have not the men available. Nearly every month I call attention to the dearth of prison labour, and I understand the Department is in communication with the Prisons Department about the matter.

8. What class of prisoner is generally sent to this work?—I do not know a great deal about the method of classification, but I think in the first place they send out good-conduct men who it was thought would be amenable to such treatment. Latterly the Government have been a little more strict in selecting the men, and the Waipa camp is really a first-offenders' camp. I do not know, however, the ideas of the Prisons Department on that point.

9. Have the tree-planting camps been of benefit in the treatment of these prisoners?—I think the system has had a good effect in reforming the men. After leaving prison they are in a better position to engage in an honest living. We have employed a number of discharged men, and, of course, we have not had success with every one; but there are plenty of men I know of who have stayed with us some months, earned a few pounds, gone back to the towns, and got into a fairly decent job. In employing men after they have been discharged we are very particular in selecting them. Latterly the Prisons Board have allowed men out on probation on condition that they would get work at tree-planting.

10. What is your opinion as to utilizing consumptives in this work?—The chief fault I had to find with the labour of consumptives was its uncertainty. A Sister was put in charge of the place—it was an offshoot of the Cambridge Sanatorium—and the men did not realize that they had to earn their living. They were told that if they could not pay for their keep there the Health Department would remit it; consequently they were not keen on work. Latterly the system worked better, although we found that only about half of the patients sent to us were capable of doing the hard work, the other half being incapable of doing heavy work such as fencing and digging the holes.

11. Was each man on piecework?—They were paid on the co-operative system, and that was one of the faults, the men who were comparatively strong not caring about sharing with the men who could do but little in a day.

12. Can you suggest how that difficulty could be obviated?—If we are going to utilize consumptives' labour it must be done with one large camp, or perhaps two. If there are a hundred men to be employed there had better be one camp established in such a place where there will be plenty of tree-planting for five or six years to come. Then it would pay to have a doctor in charge to advise whether a man was fit to work or not. With a Sister in charge the men simply traded on her sympathies, and many would not work at all.

13. In such a camp would it be necessary to employ an overseer to instruct the men as to their work?—Occasionally you would have to send some one to overlook the work, but you would not want a man stationed there permanently.

14. Should such work be treated as on a strictly commercial basis, the Forestry Department not being saddled with any more cost in regard to planting than would be the case if it were done by free labour?—If there is any deficiency the Forestry Department should not have to pay it. It would be far better to give these patients a piece of land to plant, and at the end of the year pay them by results.

15. *Mr. Murdoch.*] Then you would have to provide supervision?—Yes. With a camp of a hundred it would pay to do so.

16. *The Chairman.*] What is the least area you consider should be planted to do the work on economical lines?—I would not advise anything under 5,000 acres, unless you planted blocks of 1,000 acres each close to one another, so that the supervision would not be heavy. 5,000-acre blocks would be better than 1,000-acre blocks, as the fencing would be less; also the boundary fire-breaks would be more extensive.

17. If a camp were established in a central place, what radius could be planted with economy without having to move the buildings?—It is not profitable to ask the men to walk more than two miles. A mile radius would be all right.

18. Two miles would mean a planting-area of nearly 10,000 acres?—Yes; that was the object in placing the Kaingaroa camp where we did, so that we could work quite a large number of areas from there and keep the work going a long time from the same camp.

19. Do you consider it is more economical to have one central nursery for each Island, or to have nurseries in the localities where plantations are likely to be established?—One nursery would not do for the whole of the North Island, but I would not favour having a nursery for every plantation or every little district you are going to plant.

20. Do you say that because of there not being sufficient planting-ground at Whakarewarewa, or on account of the difficulty of distribution?—On account of the latter. It would be rather costly to send trees from Rotorua to be planted in the Wellington Province, whereas it might prove inexpensive to send trees from Rotorua for planting anywhere between there and Auckland City.

21. In the event of any plantations being started on the Karioi Plains would it be easier to bring the trees from Rotorua than to establish a nursery on the plains?—It is largely a question of the railage and other carriage from Rotorua. I feel quite certain trees would succeed there, they grow so rapidly. It is far better to confine your nursery operations to big nurseries rather than small ones, because there is the cost of planting which would run the expense up to a very high figure.

22. Have you made any experiments in sowing seed *in situ*—pines or gums?—Yes. Some years ago we tried several species of *Eucalyptus*, but the results were not encouraging. Last year I made a sowing of Douglas fir and *Pinus radiata* seed, and also some eucalypti, on the Kaingaroa Plains, but still we had no success. Very few seeds germinated, and those that did died out. The experiment was tried on a piece of land that was ploughed up for a fire-break, but it was a dry season. I intend to try again on some fern country where the young seedlings would get some protection, and I think they will do better.

23. Have you had any experience of planting on the north of Auckland gum lands?—Yes.

24. Would you recommend that an experiment of sowing *in situ* should be tried there?—It ought to be tried everywhere where we are carrying on forestry operations. If it were a success it would certainly reduce the cost of planting.

25. Have you made any experiments in connection with fire-belts by planting fire-resisting trees?—No.

26. If the poplar were planted on the outside of the plantation for the width of a few chains for fire-resisting purposes, would it be of great assistance in preventing the spread of fire?—I think so. Of course, there is always the danger of the poplar leaves carrying a ground fire; but a belt of poplar between big areas of inflammable trees like pines would be of great assistance in stopping a fire.

27. You know the native fuchsia-tree: would it be possible to grow that tree in connection with a poplar belt?—I think so.

28. Would a side bank help to keep a fire from spreading?—A side bank or ditch or rough-ploughed furrow will stop a ground fire. With a belt of poplars it would be a good idea to have a cleared piece of ground on each side of them; then they would be far more effective.

29. Then a comparatively narrow fire-belt under those circumstances would probably be sufficient?—Yes.

30. What size do you estimate the larch would be at fifteen years of age?—The figures in the Forestry Report for 1909 are not mine, although my name appears there. They were made up at the time Mr. Matthews took ill and left for Auckland, and I had to send them into the Head Office.

31. You would not then be prepared to endorse the figures in that return?—No.

32. *Mr. Lethbridge.*] What is the best plan to adopt to try and prevent danger from fire in the nurseries and plantations?—Our present system ought to do. I think you all saw it.

33. *The Chairman.*] Do you think the fire-breaks are wide enough?—I think there is sufficient ground taken up by them, because the spread of the fire depends very largely on the direction of the wind. Of course, you cannot always get fire-breaks running in a direction that is the most desirable. We try to do so, and if the prevailing wind is north-east and south-west we arrange the breaks to run north and south, and east and west; so that the plantation would be protected accordingly. That is one point that could be considered—the direction in which the fire-breaks are running. On the Kaingaroa Plains we have made the fire-breaks to run from north to south and from east to west. With regard to the upkeep of the fire-breaks, the boundaries of the plantations do not show much land unoccupied or even not brought into cultivation, as the boundary fire-breaks will always have to be kept ploughed and cultivated.

34. And the land along the public roads will have to be kept ploughed and cleared?—Yes.

35. Is not that the most dangerous place?—The most dangerous places are where fires can start on private land and spread to ours. The utilization of deciduous trees is also a good idea. Then there is the watching of plantations. In a dry season you will have to appoint a man simply to patrol the boundary and keep a lookout for fires. Then I would recommend keeping a number of workmen living on the place, who would be handy in case of necessity.

36. In case of a fire I suppose you have some difficulty in getting the men necessary to put it out?—We have had that experience, and it should not be the case. You want means of suppressing a fire expeditiously; also means of conveying water to the men engaged in fire-fighting, both for pouring on the fire and also for drinking.

37. Does the Government allow you to offer double wages at the time of a fire?—I did pay double wages, and the Department did not disapprove of my action.

38. Have you asked the Department to provide means for carrying water or for getting men to a fire?—I have not done so so far, but I have made certain recommendations in that respect this year. If we provide places along the Waiotapu Road, and at Whakarewarewa and along the Wairoa Road, where we can get water handy, we could carry on our work to greater advantage.

39. Apart from prison labour have you any difficulty in obtaining free labour when you require it?—At times we have, but at others we can get plenty of labour.

40. Do the free labourers work on piecework or by contract?—On day-wages—8s. a day.

41. With regard to Puhipuhi Plantation, would you suggest that in future such land as that should be planted with forest-trees?—I think so, where the land is poor. But it is no use planting a 1,200-acre block in the centre of an area of 10,000 acres. Plant the whole area suitable, and open the rest for settlement as soon as possible, because if you have close settlement alongside the planted area you are the more likely to be keeping down the growth which would otherwise carry fire.

42. The Commission visited that plantation and found that a number of eucalypti which had been scorched by fire were sending out shoots from the bottom. Do you think those trees will come up again and prove fit for timber?—Yes. I would like to see the Department pursue an active planting policy there, or else abandon the place altogether, otherwise we are inviting a repetition of what happened from fire.

43. You are aware that outside the 1,200 acres reserved for planting the area has been subdivided for settlement?—No. Under those circumstances I would recommend the place being abandoned. 1,200 acres is not a sufficient area, and that particular area is very badly stocked with trees.

44. *Mr. Lethbridge.*] Here is a specimen of timber from a *Eucalpytus* tree grown by Mr. Reynolds near Cambridge. It has been in the ground for twenty years and used for stockyards. It is *Eucalyptus Macarthuri.* What do you think of it?—It should be a very valuable timber for the farmer.

45. What is your opinion of the *Robinia* for farming purposes?—We tried it, but it was not a great success. It is a good timber for the farmer, but the piece of *Eucaylptus* you have shown me would be far better.

46. *Mr. Clarke.*] With reference to future planting, are you giving special attention to growing trees for building-construction as against fencing and that kind of thing?—Our planting now is all for building-timbers.

47. What pines do you recommend should be planted?—The Douglas fir is the most valuable tree we can grow; for special purposes the *Pinus radiata.* I also recommend the *Pinus strobus* or Weymouth pine, the *ponderosa,* and the Corsican pine (*Laricio*).

48. Have you tried the Scotch pine at anything like a high altitude?—We tried it at Waiotapu at about 1,200 ft.

49. In view of the considerable amount of high land we have in this Dominion is it desirable to experiment with other trees, such as the *Pinus sylvestris,* for the planting of such areas?—Certainly.

50. Are there any other American trees you recommend for the high rocky ground—the yellow-pine, for instance?—We have had difficulty in getting the seed. I would suggest the *Pinus palustris, Pinus taeda* (the loblolly pine), the *resinosa* (red-pine)—all very good trees—and also the *Lambertiana.*

51. If there is any difficulty in getting certain seeds is it not advisable to set apart an area to test the growing-properties in this country of, say, the yellow-pine?—If you cannot get the seed such trees are useless in regard to afforestation here.

52. Is it not possible to get the seed from anywhere?—That tree is grown only in America. The only American species you can buy in Europe is, I think, the *strobus.* You might also get a little redwood seed there, but not here.

53. Would you suggest starting a plantation for seed purposes later on?—We might try 100 acres for that purpose.

54. *Mr. Murdoch.*] Do you think the fire-breaks are reasonably safe at present?—Yes, with an additional constant supervision.

55. In the event of a heavy fire from any direction, could it be stopped before it reached the plantation?—It is very difficult to stop a fire in the crown of a tree—a flying fire.

56. I admit you can stop a ground fire if you have your men there in time, but do you think the present fire-breaks are protection against a fire in the leaves on the ground?—The present fire-breaks are naturally a help in stopping a ground fire.

57. Do you not think wider fire-breaks, supported by poplars, would be much safer?—I do.

58. In that case we would not be wasting the ground, because the poplar timber would be employed afterwards?—Yes.

59. Would it be safer?—I look on the present system of fire-breaks as valuable in this way: you can get about, and have a place to fight the fire from, if you keep them ploughed.

60. Besides you always have a road round the plantation?—Yes.

61. Would it not be much better for the Government to go to the extra expense of making breaks that would be reasonably safe than the present narrow breaks?—Well, instead of leaving them at 1½ chains as now, if we were to leave 1 chain, and plant 2 or 3 chains on each side of these breaks with deciduous trees like the poplar, that would certainly be of very great value in stopping a fire.

62. And a good insurance fund?—Undoubtedly.

63. In ordering seed would it not be better to obtain it as far as possible from pedigree trees, or the very best trees in any plantation?—That is the ideal state of affairs. We do that in the case of the *Pinus radiata,* and possibly some of the eucalypti, but I do not know of any tree we can get sufficient pedigree seed of.

64. In the light of experience would you continue to plant many of the trees now growing in the Government plantations?—I would not advise the planting of any more of the *austriaca*

pine. Possibly it would be a good plan not to grow so many larch, but rather timber suitable for building-construction. Beyond the *austriaca* pine and the larch I do not think we have planted anything but useful timbers.

65. What about the alder? Will that be of much use?—Only a few dozen were planted on bare shingle along the river-bank where nothing else would grow.

66. Would not gums grow there?—No.

67. *Dr. Cockayne.*] You say that the fire-breaks on the Kaingaroa Plains are so arranged that the fire would strike them obliquely. Is that the case also with regard to fire-breaks at Whakarewarewa and Waiotapu?—No.

68. Then the oblique fire-breaks are a more recent development?—Yes.

69. Are not the older fire-breaks therefore much more dangerous than the new ones?—Yes, some of them, not all.

70. How much of the Douglas fir have you got planted?—Roughly speaking, about 300,000 trees.

71. How much *Pinus strobus?*—About the same number. It is doing very well.

72. How does its growth compare with the *Pinus ponderosa?*—About equal.

73. Is that and the *Laricio* doing well?—Both are doing equally well.

74. Then the *strobus* is quite as good in your experience as the *ponderosa* or *Laricio?*—Yes, in regard to rate of growth.

75. Have you had any experience in regard to getting the seed of the Norfolk Island pine?—No.

GEORGE GUIDO SCHWARTZ sworn and examined. (No. 79.)

1. *The Chairman.*] I understand that you are an architect?—Yes. I am the president of the Wellington Branch of the New Zealand Institute of Architects.

2. The Commission thought that probably you could give us some valuable information in regard to the timbers you consider might be useful to plant here for building purposes?—Any of the Home timbers would be suitable here.

3. How long have you been in the Dominion?—Thirty-five years.

4. In practice all that time?—Yes.

5. I suppose your experience is similar to that of others, that timber is increasing very much in price?—Yes.

6. Is the quality of the timber as good as it was ten or fifteen years ago?—Nothing like it. The quality is steadily going down.

7. What are the principal timbers used here?—Red-pine, matai, and totara. Some black-birch growing in this neighbourhood is used for piles.

8. What is the difference in building in timber and in brick or concrete as regards a dwellinghouse?—It would run from 30 to 40 per cent. more in the case of brick or concrete, timber being that much cheaper. We have not advanced so much in the case of ferro-concrete as far as machinery goes to make it cheaper.

9. In the event of timber rising to double its present price would it be cheaper to build in permanent material than in timber?—Decidedly.

10. In that case the demand for timber would slacken off?—It would indeed, and as more machinery comes into the country, and people better understand how to work concrete, the latter would be even far cheaper than brickwork. But that is not the case at present.

11. Is the expense of upkeep much less in the case of permanent material than with a wooden building?—Yes. With any building-timber the cost of upkeep is altogether too much in this country.

12. Is there much Oregon pine being imported into this city now?—A big load came in two months ago.

13. Is that considered a satisfactory timber by architects?—Provided always you get the quality. A large number of trees in America have been tapped for resin, and they are being cut down and sent out for building-timber.

14. How does tapping affect the timber?—It makes it very poor and takes the life out of it.

15. Do you know the timber called the "three-ply" timber?—Yes.

16. Is much of it used locally?—In joinery only. It all comes from Norway.

17. Is there anything you wish to add?—In regard to New Zealand timbers, one thing should be observed—that is, the time of the year when the tree is allowed to be cut. On the Continent of Europe—I am a German—nobody can cut a tree without the permission of a forester. The offence of cutting without permission is punishable with imprisonment.

18. Whether on private or Government land?—Every class of timber land is under the supervision of a forester, and he is the only man who can grant permission to cut a tree He sees that only matured timber that does not shrink is cut. If our timber-trees were treated in the same way we would get better-quality timber. At present it twists and shrinks only because it is cut down out of season.

19. Have you had any experience in regard to birch timbers—the red-birch, for instance?—Only in respect to the silver-birch from the West Coast, used for boards round the foundation.

20. *Dr. Cockayne.*] Do you think if that birch were cut at the right time it would not warp?—It would not; the difference would surprise you.

21. *Mr. Clarke.*] Do you agree that afforestation should be undertaken in order to supply our wants when our native forests are exhausted?—It is a most essential matter. It is the duty of the forester in Germany to see that the man who cuts the timber replants ten times as much as he cuts, consequently the Germans have not cut out their supply. A similar law is wanted here.

22. Then the State here would be doing a wise thing by immediately establishing plantations to enable us to be independent of foreign supplies?—Rather, because you have the country here that will grow timber well. There is any amount of land here that will grow nothing but trees.

23. *Mr. Murdoch.*] Can you give the Commission reasons for saying the quality of our timber has been steadily going down for the last ten years?—Yes. The first trees that were cut were mostly growing on high ground, and were matured trees. As the years have gone on the timber has been taken off land lower down, and there it is not of the same density as the timber that grew higher up. Now it is taken off wetter ground, and the fibres are not so close as those of the timber we used to get in the past. There may be some of the old class of timber left, but we do not get it.

24. Do you not think that the exportation has something to do with the matter: that the best is exported to Australia, and now everything else that comes off the saw is sent to the local market to make things pay?—That is partly the reason.

25. *Dr. Cockayne.*] Have you had any experience in connection with powellized timber?—I have used some of it, but they do not powellize any heart timbers. It discolours the timber, and the original colour cannot be replaced.

26. What class of powellized wood have you used?—Red-pine, for ordinary building.

27. Do you think the timber loses any of its quality by the powellizing process?—It gets slightly rough in the grain.

28. Was it in the building long enough to enable you to form any opinion about it?—Five years, and my experience of it is that you cannot get what you want by that process.

DAVID CUDDIE sworn and examined. (No. 80.)

1. *The Chairman.*] You are the Director of the Dairy-produce Division of the Department of Agriculture?—Yes.

2. Has your Department experimented with any New Zealand timbers for butter-boxes other than white-pine?—Not extensively. We made a small experiment two years ago with poplar, and it turned out very well.

3. Do you think it would be a good thing if some exhaustive tests were made with other New Zealand woods?—I do.

4. Say, with taraire and tawa?—Tawa has been used for making butter-casks, but now casks are not used. It suited the purpose well, and there is no reason why it should not be used for butter-boxes.

5. Have you tried *Pinus insignis*, or *Pinus radiata* as it is now called?—No. I see no reason why it should not be useful in that respect if paraffined or used with parchment paper. Wood of that description when thoroughly seasoned would make a very good package.

6. Are you aware that the Commission has been making experiments in a small way as to other timbers?—I happened to be in Auckland the day the butter was packed, and I would not approve of the test as being reliable, as the packages were too small. You want to pack it under normal conditions, using the same class of butter that is packed in the white-pine boxes, so that you would be able to note the deterioration, if any, between the two lots.

7. Here is a sample of dovetailed white-pine boards turned out at Mananui Mill. Would timber dealt with in that way make a good box?—So long as the dovetailing does not apply to the ends of the package there would be no objection to it.

8. What is the objection in the case of the ends?—A great many of the packages have to be opened for examination prior to shipment, and the lids have to be forced off, and it is possible that with the dovetailed boards the ends would part and the package break to pieces.

9. Then you do not think it would do as regards the ends?—A series of exhaustive tests could be made with such boards to see if they would do, but at present I do not see any serious objection to them being used for the top and bottom of the packages, and perhaps there would be no objection to the ends also.

10. How old was the poplar timber you experimented on?—It was from a tree fifty years old.

11. *Mr. Lethbridge.*] Where did you get it from?—On the Nelson side. It was a Lombardy poplar. The boards showed this little difficulty, that they did not hold the nails as well as the white-pine, but that might be got over by having a barbed nail.

12. *Mr. Murdoch.*] What class of timber do they use in Siberia?—I fancy, Baltic timber. Some years ago a dairy factory in the South Island could not get white-pine for their cheese-crates, so they used birch, or beech, but it was found in the nailing that a great many packages got broken, the wood being more friable than the white-pine.

13. *Mr. Lethbridge.*] Do you know what timber they use in Canada?—Spruce for butter-boxes; bass and elm for cheese-boxes.

14. *The Chairman.*] What qualities are required in timber for butter-boxes?—The first essential is that it will not taint the produce readily. Another is that it has an attractive appearance, white in colour, fairly tough, and not too heavy.

15. In regard to cheese-crates the conditions would not necesasrily be so rigorous?—No; I think it would be possible to allow a little more latitude in the case of cheese, as it is not so easily tainted as butter.

16. Are many of the white-pine boxes used here for packing butter in paraffined?—No, very few of them.

17. Why do they paraffin some and not others?—Some of the dairy companies have an idea that a little is saved in shrinkage by paraffining, and others again deem it a sort of insurance against green timber. But it is not really essential if you use two thicknesses of parchment paper.

18. *Mr. Lethbridge.*] But paraffining would not be so expensive as two thicknesses of parchment paper?—About the same. It costs about 1d. a box to paraffin.

19. Do you know what price the Dairy Association in this district is paying for their boxes?—I understand they are paying up to 1s. in some cases.

20. In Dunedin we had evidence that they were paying 1s. 8½d.?—They are not paying that here, but only about 1s.

21. Where do they get their boxes from?—Many are made in Wellington by the Wellington Cooperage Company.

22. *Mr. Murdoch.*] Is it essential that the white-pine should all be seasoned?—Yes. It is detrimental to the cheese if it is not seasoned.

23. Seeing the large demand there is likely to be for timber for agricultural produce, do you consider it would be a wise policy for the Government to encourage the planting of trees by settlers so that there may be a timber-supply distributed throughout the country, thus saving heavy accounts for freight, &c?—Yes; it is only a matter of time when we shall be very badly off for timber for our boxes, so I would encourage the planting of trees, especially quick-growing varieties that will come into profitable use at an early date.

WINNARD MELTON SINGLETON sworn and examined. (No. 81.)

1. *The Chairman.*] What is your position?—Assistant Director of the Dairy-produce Division.

2. You came from Canada?—Yes. I have been twelve years in New Zealand, and had considerable experience in dairy matters before I left Canada.

3. Can you tell us what style of package the butter is packed in there, and the class of timber used?—At one time they used the round tub a good deal, of spruce timber, but of late years they have used boxes like ours here, of the same dimensions, to hold a similar quantity. The pine is used principally, but it differs somewhat from our pine in that it imparts a flavour to the butter which is not desirable, and to overcome it they use paraffin. They also use parchment paper as well as the paraffin.

4. Have they unlimited supplies of the required timber?—I believe so, and they are getting now a large quantity from British Columbia. Although the timber is limited in North Ontario the supply there is by no means exhausted yet.

5. Do you think the *Pinus insignis* timber, as per this sample, would do for butter-boxes if treated with paraffin?—It would seem all right as far as quality goes.

6. Is it a timber that it would be advisable to experiment with seeing that it can be grown very rapidly?—Yes, paraffined it should be worth trying.

7. A lot of the white-pine boxes are paraffined here, are they not?—Yes; it is claimed that a saving is made in regard to the shrinkage of 4 oz. of butter. Some firms put in as much as 4 oz. less on that account.

8. Here is a white-pine board made up of some small pieces by means of a dovetailing machine. Would that do for butter-boxes?—We had trouble with some boards which had been put together in only two pieces, and on the grading-room floor when we were opening up the boxes they came apart. At the same time, in my experience of cheese-crates, when two pieces of board were put together for the ends the boxes were satisfactory.

9. Is there much butter exported from Canada now?—Practically none was exported last year. The export has been decreasing for some years.

10. Then there is likely to be an increasing demand on New Zealand for butter from abroad?—Yes. They export a good deal of cheese, and there is a tendency in a number of districts to return to butter on account of the increased local demand for the latter.

11. How is the cheese packed there?—It is packed in something like a hat-box made of cardboard, with a belt around it.

12. Of what timber?—Elm for the belt, and bass wood for the headpiece.

13. *Mr. Murdoch.*] Can you say what class of package is sent from other countries, such as Denmark and Siberia, to Britain with butter?—A good deal was sent in casks when I was there five years ago.

14. And from Siberia?—I did not see much from there, but am speaking of Danish more particularly.

GIBBES CLAUDE BORLASE JORDAN sworn and examined. (No. 82.)

1. *The Chairman.*] You are the Under-Secretary for Justice?—Yes, which includes Prisons.

2. What percentage of the male prisoners is engaged in tree-planting operations?—The numbers at the different camps for the year 1912 were: Waiotapu, 35; Waipa, 20; Hanmer, 25.

3. What was the total number of male prisoners in prison during the year ending 31st December, 1912?—We have between eight hundred and nine hundred prisoners.

4. Can you give us any idea if the number employed at tree-planting in 1912 is likely to be increased?—We could increase it, but we have to be very careful what class of prisoners we send to these camps. We have been very strict of late, and that has reduced the number. It was necessary, because the camps were not in the condition they ought to have been in; but by employing a larger staff and having more supervision we can probably send a larger number of prisoners there that could not be sent out with the present staff. There are forty prisoners at Kaingaroa and four officers, and all those prisoners could run away at any time they liked. We have to depend on their good behaviour. But these prison camps are very expensive to run; the smaller the number of prisoners the greater the cost of maintenance.

5. Has the system of employing prisoners on these plantations proved satisfactory to your Department as regards the reformation of the men?—I think so. It is probably about the only thing that has a real reformative effect on the men. But the system does not affect those who do not wish to be reformed. Then, again, there are numbers who ask to be sent back again to the city prisons. They do not like the camps, but prefer to be in the town prisons, where they can get the latest news of what is going on.

6. In employing prisoners in plantations is it considered advisable to concentrate them in large camps, or in a number of small ones?—In my opinion it would not be advisable to concentrate them in large camps, but it would be better to have small camps. From fifty to sixty men would be quite enough to put in one camp.

7. Is the Prisons vote credited with the value of the work done by the prisoners?—No, we get no credit for it, and that is a point we are going to take up.

8. In the case of all other Departments it is the practice to credit a Department with the value of the work done by it for another Department. Do you think that would be a satisfactory way of dealing with this matter from the point of view of your Department?—Yes, something ought to be done from that point of view, and it would then lessen the cost of the system to the Prisons Department.

9. What is the average cost of keeping the prisoners?—In Auckland Prison the average cost is £38 per annum; at Hanmer, £50; at Waiotapu, £72; at Waipa, £64. On the average it costs nearly double to maintain these prisoners at the camps.

10. Supposing it cost 12s. 6d. per thousand to dig the pits for tree-planting by free labour, would your Department be satisfied if the prisoners were credited with the same rate for the same amount of work?—Yes.

11. Would that put the matter on a commercial basis?—Yes. The present idea is to make provision for paying prisoners sentenced to reformative treatment for the labour, beyond the cost of maintenance, and this is one of the works which might enable us to do something in that direction. They would have to earn anything they got in the shape of payment. The payment, of course, would be only small. Tree-planting is a case where you can class and value the prisoner's work. Of course, we cannot take any step in that direction until the finance is provided, and other Departments do not now pay anything to us for prisoners' labour. They take our labour but do not pay for it.

12. Those are the principal matters on which I wished to get your opinion, but if there is any other you would like to bring before the Commision we shall be very glad to hear your views?—I do not think there are any. Dr. Hay is getting some figures on the question, and may be able to further deal with the question from the departmental point of view. As to the tree-planting camps, Hanmer seems to be the least profitable to the Department. We have a difficulty in getting a number of men there, but we have to keep a staff we would be glad to send elsewhere. It has struck me that it is the least profitable of the camps, and we would like to close it up; and in fact we propose to do so.

13. Is there any particular reason why it should be closed? On account of the more rigorous climate? Or is it because there is not sufficient land there to extend the planting operations?—It seems to me that that camp is bound to come to an end within a short time on account of the want of land—within a couple of years, I understand.

14. In the event of further land being acquired in the vicinity would that get over the difficulty about closing the camp?—Undoubtedly, if we could maintain the camp properly we could give the Forestry Department a fair number of prisoners for two camps. We have the Invercargill reformatory and the Waikeria farm, and we propose to send a number of young men there who would be suitable for tree-planting.

15. What class of work do the prisoners do at Invercargill?—At the present time the men are engaged in reclaiming land which will do for farming purposes and vegetable-gardens.

16. Is your Department credited with the value of the work done there?—We are just in the same position there as we are in respect to the tree-planting for the Forestry Department. We get 650 acres of land in payment of the labour for the reclamation. With regard to reclamation we only provide the labour. At Auckland we do stone-breaking, for which we get a fair amount of cash—for the stone which is obtained on the prison reserve.

17. Is the stone paid for by the local bodies?—Yes. In Wellington there is some brickmaking done, but we do not sell the bricks outside. The Government takes them, and credits us with their value. We have not got any money to provide for all these growing forms of prison reform, and especially for the payment of prisoners; but there is a good deal to be said for the latter proposal. You can get a fair amount of work out of the prisoners if they are handled properly and kept going. You get a class of men who as long as they are kept at work will work hard; but we also have men who will not work at all, and you cannot make them work.

18. *Mr. Murdoch.*] You think you could only supply prisoners for two camps?—It would be better to concentrate on two camps, and maintain them with a fair number of prisoners.

19. *Mr. Clarke.*] Is there any other method of dealing with prison labour whereby the work of the men can be assessed at the same rate as free labour?—I would not say that it is even necessary to assess it at the same value as that of free labour, but I would like to get some remuneration for it which would enable us to make some small payment to prisoners, though not necessarily at the full value of the work.

20. How would it do, if they dug a thousand holes, instead of crediting the Department with the amount the work would cost if done by free labour, to credit it with the actual cost of the work by prison labour?—That plan would not give us anything; you have also to maintain the prisoners.

21. Assuming that it cost 50 per cent. more to maintain a prisoner in a camp, how would it do to value his work accordingly?—That would leave us no margin for the prisoner himself, but would only pay our cost.

22. But a percentage of profit or reward would still be added on at the end. Is it fair to compare prison labour with free labour under any circumstances as to value?—That is a matter the future will determine; apparently people consider this system of paying prisoners is going to be of great value.

23. Do you not think it might also turn out a disadvantage to your Department? If it costs 12s. 6d. to dig a thousand holes by free labour, but your Department 15s. by prison labour, would it not be a loss to the Government, and therefore inadvisable to pursue the policy?—If it costs our Department 15s. it would be a loss. From one set of figures given to me it looks as though the cost was considerably more than that per thousand trees.

24. In that case does it not go to prove that your Department is on the wrong line altogether, and that it would be better to abandon the system and leave the work to be done by free labour?—It is a good thing from a prison point of view, even if we do have to pay a little more, to have a place like a tree-planting camp to send the better class of prisoners to.

25. Would you still advocate this proposal even if it is shown that the system costs more than the free labour?—Up to a limited point I would.

26. *The Chairman.*] I think the point is that you would have to maintain these prisoners whether they were tree-planting or not, and that if you could utilize their labour and get credit for their work it is so much gain to your Department?—Yes. If you can employ prisoners at some labour that they consider is of some use or value, which they can take an interest in, it will do them good, but if it is mere routine work it is of no value.

27. *Dr. Cockayne.*] Does the tree-planting work bring in more to the State than the ordinary prison labour?—I suppose the tree-planting would pay the State, but I would not advocate it for the sake of the prisoners only, because, after all, the one idea of prison-management is to fit the prisoner who has no trade to do something for himself when he comes out. Tree-planting is all very well, but he would not find in the open market employment at it.

28. *The Chairman.*] Then if you are making the prisoner a better man by giving him a trade he will be more useful to the State eventually?—We cannot do in that respect the things we would like to do, because we must not come into competition with the public in the towns. I think you make better men of the prisoners at the tree-planting camps than of those left in the prisons.

29. If some of the men you do not send out at present were put to tree-planting would a percentage of them be reformed?—It would be hard to say. You might expect a percentage to be, but it would be a very small number that would be benefited by the treatment.

30. *Dr. Cockayne.*] Were the prisoners we saw at Hanmer any worse-behaved than those elsewhere?—No, there is a good class of men there.

31. The conditions there seemed to be more pleasant than at the Kaingaroa Plains: is there any particular reason for that?—From a prison point of view they had a little bit too good a time at Hanmer. You can go too far in regard to indulging the men, and that is what happened at that camp.

32. We noticed pictures in the huts at Hanmer, but nothing at the other place?—Yes; when it comes to plastering the walls all over with the pictures you saw it has not a very good effect on the prisoners' morals.

33. Well, the Maoris were working very well at Hanmer?—So I understand. When I was there I noticed the men were working really well, but whether it was only a spurt for the time being I do not know.

Frank Hay, M.B., sworn and examined. (No. 83.)

1. *The Chairman.*] You are the Inspector-General of Mental Hospitals and Inspector of Prisons?—Yes.

2. It has been suggested that in dealing with the convalescent consumptives they might be employed in tree-planting operations, say, in the Waiotapu district, or possibly in Central Otago. One of the difficulties that might crop up might be in regard to medical attendance, so it was thought possible that work might be found for these people on the land your Department has acquired near Kihikihi, where they would be quite close to medical supervision. Have you work of that kind at that place?—We have not got any land there for tree-planting. It is all agricultural land, which we will want for farming. There might be a few shelter-belts required, but that is not what you mean, I presume.

3. If you had a large amount of agricultural work going on there could not the consumptives be employed at it?—The question comes in of their fitness for it. We would need to have teams of horses, ploughs, &c., and I am not sure that these people would be sufficiently strong for that kind of work.

4. Would there not be a good deal of clearing, draining, and ditching to be done on the site?—Draining is, of course, a laborious operation, but the clearing of that class of country is only a matter of putting a match into it.

5. Then you do not consider the suggestion a practical one as regards employing such patients there?—Not from the mental-hospital point of view. From the standpoint of the prisons the idea is absolutely excluded, because you cannot have free labour associated with prison labour. When you employ expensive teams of horses you cannot trust them to people who are not expert in those matters. If such a scheme is brought forward naturally one desires to do the best one can for that class of unfortunates, but just now I am looking at the matter purely from the business point of view.

6. Is the work you speak of to be done by the inmates of the mental hospitals?—We have a certain amount of paid labour always on the estate, and there are also a number of the inmates who are able to do this work, having been expert farmers.

7. Have you any data available in conection with the cost of the prison camps?—Yes. At Waiotapu the cost per thousand trees was £1 5s.; at Hanmer, £2 6s.; at Waipa, £1 19s. The latter is a newer camp, and there has been a good deal of fixing up to do. Roughly speaking, these figures indicate that were we paid for the work the camps would be free of cost, taking the rates paid at those paid for free labour.

8. Are there any other matters you wish to mention in regard to the employment of consumptive labour?—I think Central Otago would be a magnificent place to send these men to, the climate being so fine, but it might be difficult to cater for their comfort there on account of the district being so far back.

9. *Dr. Cockayne.*] But the camp would be placed near the railway-line?—I suppose so. Medical attendance would only be required in an emergency, and with the railway handy a medical man could be brought down on a trolly if necessary. There must be a good nurse in charge who could apply first aid.

JAMES BURNETT sworn and examined. (No. 84.)

1. *The Chairman.*] You are the Chief Engineer, Working Railways Department?—Yes.

2. Can you tell us the number of sleepers used by the Department at present and that are being treated by preservative methods, such as creosoting or powellizing?—At present we are powellizing about fifty thousand a year. There are a number of creosoted sleepers in use in the lines now.

3. Have the creosoted sleepers proved satisfactory?—Yes, comparatively. It certainly doubled the life of the softwood sleepers that were so treated, but there was a great difficulty in getting the creosote here. That being so, it was determined to make a trial with a new process called powellizing, which requires molasses only, a substance which is easily procured.

4. Was it on account of the cost that the creosoting process was abandoned?—No, mainly because of the difficulty in getting a supply of creosote, which comes from Great Britain.

5. What is the cost of creosoting a sleeper?—About 1s. 8d.

6. What class of timber was so treated?—Kahikatea, rimu, and a small quantity of miro.

7. What time did the creosoting add to the life of a sleeper?—The average life of the creosoted sleeper would be about sixteen years. There are many in the lines now which have been in about twenty years, but the average would be about sixteen years, as against two for white-pine and perhaps seven for rimu untreated.

8. Was any of the beech, or so-called "birch," timbers treated?—I think not. They tried to find means to make it penetrate, but the timber would not take the creosote, which is put in under pressure.

9. Are any birch timbers being used for sleepers by the Department now?—We are trying some in the south by the powellizing process.

10. Have you used any in their natural state?—We have not used any in their natural state for perhaps eight years.

11. Was the experience of the Department when they were used satisfactory?—Yes, taking the average sleeper; you will find some that will be sound after twenty-five years, but the average life worked out at about eight or nine years. There would be quite a sound surface on the face of the sleeper, but the rest of it was often a mass of pulp with hard ribs or spurs between. The acids in the birch have a bad effect on the fastenings and rust the spikes badly.

12. Have you had any experience with larch as a sleeper-timber?—No.

13. Does your Department import many foreign sleepers, say, from Australia?—We import as many jarrah sleepers as we can induce the Government to bring in, as we have never had anything to compare with them for durability and general stability.

14. What is the average price of the jarrah sleepers landed here?—4s. 9d. I might instance a branch line in Canterbury which was laid with jarrah and kauri—kauri at the joints and jarrah elsewhere. After thirty years the original sleepers were all taken out, and 75 per cent. of the whole were in a good usable condition, but they were so small that they would be unsuitable for sleepers now. In the case of another line seven or eight miles in length, at Catlin's, south of Dunedin, which was laid twenty-four years ago entirely with jarrah, only two sleepers have been removed in that time for decay.

15. What do you think of silver-pine sleepers?—They are good.

16. Have any experiments been made in New Zealand in regard to utilizing ferro-concrete for sleepers?—No, the cost is prohibitive, and the sleeper of ferro-concrete is inferior to one with greater elasticity.

17. Do you know whether they are being used in other countries?—Only experimentally, as far as I have heard.

18. Is ferro-concrete and iron replacing wood to a large extent in bridge-building?—Yes, to a considerable extent. We have not attempted to construct piles of ferro-concrete yet, because we can get first-class ironbark piles, which last at least thirty years, and are half the cost of the ferro-concrete ones.

19. If it cost you as much to build in timber as it would in ferro-concrete I suppose you would prefer ferro-concrete piles?—They are worth more than the timber. It would pay to spend more, but not to spend double. It is better to rebuild your structure at intervals of thirty years than to pay half as much again to begin with, and have the interest running on. The Australian hardwoods have reached such a price now that it is more economical to use steel for stringers instead of timber. We are increasing the use of steel very largely.

20. This sample of gum was taken from a tree which was cut down when it was nineteen years old. It was then 22 in. in girth at the butt. Do you think such timber would make a

suitable timber for piles?—Yes, if you can judge from one specimen. But I do not think it is at all wise to judge from an isolated sample of any timber.

21. If we can get a tree that comes to maturity in a short rotation of time and fulfils the conditions of supplying suitable timber, would it not be a good thing?—Yes, but none of the eucalypti I have seen converted into timber appeared to be anything like well matured. None of the timber I have seen cut from big blue-gums forty years old has stood. It splits and warps, and decays comparatively quickly, but this sample may be from the right tree. I am not sure if it would suit every locality.

22. Would you care to express any opinion at this stage as to the effect of the powellizing process? Do you consider, as far as the experience of the Department goes, that it is going to be a success in this country?—It is impossible to express a definite opinion as to it yet. Up to the present the timber which has been treated in the North Island by the Powell Company has been anything but a success, and I attribute the fact more than anything to the way in which the treatment has been applied. The company stipulated and made a strong point of having any timbers submitted to them for treatment as fresh as possible from the saw, so that the sap would be liberated freely in the powellizing process. Of all the sleepers which we had treated there, on examination—I think there were some seven thousand, most of which came as nearly as possible direct from the mills to the works—only fifteen hundred gave any greater life than the ordinary untreated kahikatea. These fifteen hundred kahikatea sleepers, which were an overflow from the Woodville works, where there was not sufficient creosote to treat them, were sent to Rangataua for treatment by the powellizing process. Only these fifteen hundred exhibited any greater length of life than the ordinary untreated kahikatea sleepers. They were all seasoned when they went to the works, and at last reports they were still sound, with no deterioration at all. That was after two years' trial; whereas from 40 to 60 per cent. of the others were bad.

23. *Mr. Murdoch.*] And did not show any increase of life from the ordinary timber?—I think not. You might depend on kahikatea for eighteen months, but if you got the heart it would last well; there is, however, so little heart in that timber.

24. In your experience does the treatment by the powellizing process affect the strength of the timber in any way?—No. The company asserted that their treatment increased the transverse strength of the timber, and to ascertain this some tests were made, but it was found that there was nothing in the contention. Seasoned timber, of course, is stronger than unseasoned; but there is no deterioration in strength that I could detect.

25. *Mr. Lethbridge.*] Does the process keep it from warping and splitting?—No. We had a metal bin attached to a stone-crusher. It was constructed of powellized birch, and the report I got about it was that this timber had done everything which the company guaranteed it would not do—it warped, split, twisted, and shrank.

26. In the case of the sleepers treated in the Southland works, is that timber seasoned before it is treated or taken straight from the saw?—We give it as long a seasoning as is convenient, and hold it back from treatment as long as we can in regard to keeping the works going, especially since the result of the trial up here.

27. What classes of timber have been treated there up to the present?—Kahikatea, rimu, and red-birch so-called down there (*Fagus Menziesii*)—that is, birch from the Longwood Range.

28. Any kamahi?—No. We tried creosoting it a few years ago, but it splits all to pieces, like hinau.

29. *The Chairman.*] We saw some timbers under treatment which were badly infected with the worm?—You refer to kahikatea?

30. Yes?—Well, the Powell people claim that the process will arrest any insectivorous decay. We have submitted treated sleepers to the Colonial Analyst to ascertain whether the preservative has penetrated through the whole sleeper, and those that were treated at Kew showed arsenic in the centre of the sleeper. Those treated in the north showed the preservative going in only a short distance. The arsenic is intended to render the timber immune from insects, and I understand it has had that effect as far as the white ant infesting the Australian timbers is concerned.

31. *Mr. Murdoch.*] If we could grow timber such as that represented by the sample of *Eucalyptus* you have seen to-day, would it be a good thing for the Government to plant that kind of timber?—There can be no doubt about it.

32. *Dr. Cockayne.*] As to the birch sleepers, some, I understand, were cut up after twenty years?—I have seen sound birch sleepers after twenty-two years—an odd one. I have seen a stockyard built of birch—*Fagus Solandri*—and quite sound after thirty years.

33. Have you noticed the kind of sleeper where there has been a fungus growing on it?—I cannot say I have. I do not think I would have attached any importance to the hard fungus that grows on the outside of a tree.

34. Do you think an examination of all our beech-trees, in order to determine the effect of this fungus on the trees, would be an important and useful matter commercially for the country?—I think it would.

35. *The Chairman.*] Is there any other matter you wish to mention?—Our Department has always tried to get the timber for its use felled during the winter-time, but we have never yet been able to succeed thoroughly in doing so. We are quite sure that the winter-felled timber is the best. The sap is then down and the timber does not warp and split in the same way as timber felled at other times of the year does.

36. *Dr. Cockayne.*] When you use the term "birch" in regard to sleepers do you include any of the birches which are supplied by the timber people?—No; we specify that the timber shall be only *Fagus fusca*, *Fagus Solandri*, or *Fagus Menziesii*.

37. Then you are using three different timbers?—Yes, and we class them all as "birch." In some districts we know of only *Fagus fusca* being used. On the West Coast, between Grey-

mouth and Jackson's, the line was laid almost entirely with *Fagus fusca* sleepers, which had an ultimate life of about ten years.

38. And in Southland it is *Menziesii* they are using?—They are getting some *fusca*, but a comparatively small quantity.

39. From Ruapehu or Rangataua you would use both *Fagus fusca* and *Menziesii?*—They are marked separately for our purpose.

CHARLES ANDREW COTTON, M.Sc., sworn and examined. (No. 85.)

1. *The Chairamn.*] What is your profession?—Lecturer on Geology in connection with Victoria University College.

2. Do you wish to tender some evidence with regard to the effects of denudation?—The effects of reckless clearing. The term "denudation" has been applied to the matter in a report I would like to bring under your notice. It is an American report—Paper 7, on "Denudation and Erosion in the Southern Appalachian Region and the Monangahela Basin, 1911." This is the only copy in the University library, and therefore I am sorry I cannot leave it with you. Perhaps you will be able to obtain a copy. The term "denudation" has been applied to the subject, but the other word "deforestation" is, I think, very much better. "Denudation" is usually used in the sense of the second term mentioned in this report—"erosion"; but I would prefer to call it "deforestation and erosion." This paper is of special value because it contains a very careful study of the results of reckless clearing in a climate which appears to be very similar to ours. Most of the accounts have dealt with rather arid climates, and the results which have taken place on limestone plateaux. I suppose you know of cases in eastern Austria, Greece, and Cyprus, where in the old days there was a thin soil covering which supported the forest growth, and evidently had taken an enormous length of time to accumulate. The Turks, I suppose, and others cut down the timber and made use of it, and these areas then became limestone deserts on which soil has to be accumulated again in order to enable timber to be grown. This American report, however, deals with an entirely different region—the Southern Appalachian region, in the United States, which is considerably loftier, and regarding which it has been found that the trouble is caused by the reckless clearing of slopes which are really too steep to be cleared. From what I have seen in parts of New Zealand—I have not as yet had much experience in it—it seems to me that certain slopes in this country have been cleared on which the bush ought to have been allowed to live. The result brought about in that way seems to be twofold: there is, first, the direct result—a little grass may be got to grow on these slopes, although too steep at first; but apparently, after the tree-roots decay, slips cause a loss of surface soil, and so the slopes become absolutely barren. One point which is brought out in this paper is that the angle of slope on which it is safe to clear is not a fixed one—it varies with the underlying rock, and the type of soil which is produced by weather on that rock, and no doubt also to a very great extent by climate. The variation is so great on the Southern Appalachians that some slopes of 10 degrees should not be cleared, while other slopes of 30 degrees it is quite safe to clear. This paper by the United States Geological Survey Department is a complete application of correct physiographic principles, as far as I have seen, to the consideration of this question, to which I have given a considerable amount of attention, and as far as I can see the results seem to be justified. This is the first result: the slopes become useless in respect of cultivation or the growing of grass. The second result is, however, very much more far-reaching: the soil exposed by reckless clearing is washed off, and when clearing has been resorted to too much at the headwaters of streams that material is carried down-stream, leading in the lower courses of the rivers to a much greater liability to flooding. That result affects very large areas of agricultural land down-stream, and is due to the much more sudden rainfall on the land. It is well known that afforested ground holds the water that falls on the soil, but the bare ground runs that rain off immediately, with the result that there are floods, as seen recently, in the lower courses of the rivers. Another reason is that the gravel and soil when washed down into the lower courses of the rivers fills up the channels, the effect being that the channels have not the holding-capacity they formerly had, and immediately the flood takes place on the plains and in the lower courses of the rivers. A similar case results in the very rapid filling-up of reservoirs erected for different purposes. The reservoirs in the Southern Appalachian Mountains are built chiefly for power purposes, and some very large ones have been rendered almost useless for their purpose in two years. Denudation began as late as from 1885 to 1890 in that region, and the disastrous floods there have been brought about in a very few years, and the silting of the channels in the lower courses of the rivers has rendered them almost useless in some cases for navigation. At any rate it has entailed a very great expenditure of public money to keep the channels clear. I do not know that that remark applies to our rivers; but about £2,000,000, I think, has been spent in a few years in keeping open the Tennessee River, but I think that in spite of that expenditure the channel is worse than before.

3. *Dr. Cockayne.*] Have you ever been to Lake Waikaremoana?—No.

4. That lake is surrounded entirely by forest, and it is a very important place, because from it will be derived the electrical energy required for a great part of this Island. Will it be detrimental to the conservation of the water of that lake if the forest were burnt off all round the lake?—I am sorry that I am not able to give an opinion on the point. You will quite understand my reason; it requires a study on the ground to allow one to form an accurate opinion of that kind. I believe it is a limestone country there. Speaking, however, without very much authority, I should say that the basin is so large that it is not likely to be filled very readily by the removal of the forest owing to the increased amount of waste washed into it. Of course, floods

will be liable in the streams entering the lake if the forest is removed. The contour of the streams will be entirely altered. I might mention that the slope in New Zealand will probably vary very greatly between the old rocks such as we have in Wellington and the newer ones—mostly Tertiary—which form a considerable portion of the North Island and the South. Probably the angles of slope will be found to be very different, a matter that would require full and careful investigation in every district. I might say that the New Zealand maps are not of course made with the object of showing the topography, without which it would be very difficult to delimitate the slopes that are too steep to be cleared.

WILLIAM HENRY FIELD sworn and examined. (No. 86.)

1. *The Chairman.*] You are a barrister and solicitor residing at Wellington?—Yes.

2. Do you wish to tender some evidence with regard to the matters we have to inquire into?—Yes. Though possibly unable to add materially to the information already in the possession of the Commission, I feel that as one deeply interested in the subject of the preservation of our national forest and in afforestation, I should like to express my views on several of the subjects which the Commission is set up to consider. Respecting the preservation of existing native forest, I feel that a strenuous endeavour should be made to save more of the remnant of our bush than appears at present to be proposed. Though it is naturally held, speaking generally, that bush land which is fit for farming purposes should be felled, there are many cases where it would be wise to preserve our forest even though growing on land which might be successfully grazed. I refer particularly to bush growing within the watersheds of rivers, the flooding of which is likely to wash away rich alluvial land lower down. The reply to the outcry that this land is required for settlement is that large areas of open land even in the vicinity of our great centres of population are to-day not fully farmed, but are capable of much increased productiveness and of carrying a largely increased population. I have in my mind particularly the Waikanae and Otaki Rivers. At Waikanae in particular at the present time every flood is destroying land worth £40 to £50 per acre, as the result of the destruction of bush on land much of which when grassed and fenced cannot be worth more than £5 per acre, and which will in course of time decrease in value. In one case a rich section of about 25 acres has become reduced in recent years by 12 to 15 acres by the flooding of the Waikanae River, and, though a considerable sum has already been spent in river-protection, unless further effective protection works, at a cost to the settlers, the local bodies, and the Government of at least £1,000, are at once constructed, the river is likely to make a new outlet to the sea, and wash away not only more valuable land, but roads, houses, and other improvements, entailing loss to the settlers, local bodies, and the country of many thousands of pounds. Before the bush was felled the larger floods were rare occurrences, owing to the fact that the rains were to a large extent absorbed by the trees and floor of the forest, much of the water escaping by evaporation. The water now comes down as from an iron roof, bringing down larger volumes of flood-water than formerly, and with great suddenness and violence, and enormous accumulations of shingle, which raise the river-beds, causing serious erosions, and forcing the flood-waters over the surrounding level country. Where the hills felled are of a steep character every heavy rain takes with it a portion of the soil, thus rendering the land less fit to carry a sward of grass, and eventually we shall have the same desert conditions as are found in China, Cyprus, and other parts of the world, where the hills have been finally reduced to barrenness by the denudation of the forest. Already hills in the Wellington District felled in the early days of settlement are found to be of appreciably less carrying-capacity than formerly, and some are even already approaching desert conditions. And this is what was some years ago one of the beauty-spots of New Zealand, within my recollection. In my opinion the larger portion of the remaining bush in the watersheds of such rivers as the Waikanae and Otaki, on the lower slopes of the Tararua Mountains, should be preserved from destruction. I am informed that the slopes of the Ruahines, too, are fast becoming stripped of bush, chiefly by fire, and this on land which can never be farmed. As a member of Parliament I used my utmost endeavours years ago to induce the Government of the day to purchase from the Manawatu Railway Company all unfelled bush land in the Otaki Gorge, and so keep the magnificent scenery there in its natural loveliness, save the flats towards the sea from destruction, and preserve the climatic conditions. This once beautiful locality is now hopelessly marred by forest-destruction, whereas in the interests of the district and the country generally not a tree should have been felled. There are thousands of acres of native forest still remaining behind Otaki and Manakau and elsewhere which should be preserved. The land has now, however, for the most part fallen into the hands of syndicates, and the price which would be asked for it would be considerably in excess of the amount for which it could have been purchased a few years ago. There are cases, too, where settlers are led to take up and fell bush land which is quite unfit for farming, and which after a few years is taken possession of by fern and other vegetation. Such enterprises must result in serious loss if not in financial disaster. I know of whole hillsides which have been cleared of the bush, and upon which settlers have fruitlessly spent large sums in clearing the second growth of vegetation, but which have since been abandoned, and are now clothed with shrubs, tree-ferns, and the smaller forest-trees. The clearing of all the bush on the lower levels has the effect of robbing our native birds of their natural feeding-grounds, and finally compassing their extinction. The boundaries of the forest reserve of the Tararuas should be extended, and much of the bush land in the hands of Natives and Europeans on the lower slopes of the range, particularly bush adjoining existing forest reserves, should be acquired and preserved, otherwise existing forest reserves will suffer from the felling and firing of adjacent forest. A beautiful bush hillside immediately behind the Waikanae Township especially should be saved. The trustees of the deceased Native owner

would, I feel sure, sell at a reasonable price. Each year it is being further eaten into by fires, and in a few years it will be hardly worth saving. Fencing and judicious planting of fire- and wind-resisting trees and shrubs on the edges would effectually prevent further inroads into this as into other forest-areas. The Paraparaumu Bird Reserve, which is the first bush reserve of any magnitude on the Manawatu line after leaving Wellington, the whole of the forest for a distance of forty miles having been ruthlessly destroyed, should be extended by the purchase of adjoining native forest. Though perhaps beside the subject, I would strongly urge more drastic measures to save our native birds. At the present season of the year, when the koekoe is in bloom, the bush about Waikanae was at one time alive with tuis feeding on the koekoe flowers. Now there is hardly one to be seen. The pea-rifle is largely responsible for this. The native pigeons have met with a similar fate, and are now practically as extinct as the huia in the bush still remaining at Waikanae. I have myself preserved several areas of beautiful bush in the Waikanae district, and regret exceedingly that I did not save more. The preservation of bush is, however, an expensive matter for the private owner of limited means. The erection and maintenance of fences is costly, and it is usually impossible to save reserves from the ravages of wind and fire unless the margins are suitably planted. In addition to these outlays, and the struggle against natural forces, there is the continual annoyance and discouragement resulting from marauders who, when in need of timber or saplings for rough sheds, yards, and other purposes, do not hesitate to help themselves from the nearest bush reserve belonging whether to the Crown or a private individual. A severe penalty ought to be provided by statute to meet such cases. As the owner of a considerable area of sand-dune country at Waikanae, with two miles and a half of sea frontage, I should like to say a word on this subject, though the valuable report of Dr. Cockayne, F.R.S., on "The Dune-areas of New Zealand" does not leave much to be said. The checking and planting of bare and wandering sand-dunes is certainly a subject in which the State should be taking much-increased interest. The Crown should resume and treat with prison or other labour all areas which private owners are neglecting, and owners who, at great expense and often with signal failures, are striving to combat the evil should receive some encouragement in the shape of advice, and where possible a supply of suitable young trees for planting. The Crown should acquire a sand-dune area on the sea-coast, and conduct experiments for the benefit and guidance of all interested in this difficult subject. Personally I have spent considerable sums in checking and planting drifting sand, and, partly through dry, windy, and otherwise unfavourable seasons, and partly through lack of knowledge, much of the money spent has been wasted. The advice contained in Dr. Cockayne's report has, however, been a great help to me. I am convinced that the true and permanent remedy for sand-drift is afforestation, which will furnish not only timber for the distant future, but posts, rails, &c., in the near future for farm use, and much-needed shelter for stock, and to break the force of the prevailing winds, and so reduce the danger of drift-creation among the dunes farther inland. I have established numbers of plantations which are already of great benefit to me, and I have a small nursery of forest-trees ready for planting this year, but my difficulty has up to the present been to provide the first line of shelter along the sea-coast to take the first force of the westerly gales which beset the coast in which I am particularly interested. I am quite satisfied from my own experience that our sand-dunes are eminently suited for the growth of certain timber-trees, particularly conifers, eucalypti, and wattles, if only the coast shelter can be provided. As an instance of the growth of certain trees in sand, I may mention that in poor sand, though of course in a sheltered situation, I have planted seedlings of the ordinary silver-wattle in the spring, and twelve months after, in the succeeding spring, they were 12 ft. high and in flower. A subject to which I think the Government might turn its attention is the establishment of a State botanical garden. Adjoining the Levin State Farm is a beautiful and historic spot, the late Sir William Buller's Papaitonga Lake property, containing about 300 acres, of which about half is lake, and which I believe the trustees are willing to sell at a reasonable price. The North Island agricultural college is likely to be established on this State farm, and Papaitonga should, I think, form an adjunct of the farm. Already there is a considerable area of beautiful bush upon it, containing most of the forest-trees and shrubs found in low altitudes in the central province of the Dominion, and the land would, I think, be found to be well fitted to grow all our native trees and plants, except perhaps those indigenous only in the extreme north and south, and those which require alpine or other special habitats and soils. Such an institution would be of enormous interest and educational value. With regard to the question of State encouragement and assistance in tree-planting, I am strongly of opinion that all private bush reserves, plantations, and nurseries should be absolutely freed from general and local taxation, and the State should as far as possible provide, free of cost, up-to-date advice to all persons desirous of afforesting their lands, and in some cases give trees also. While saying this I should mention that the officers of the Agricultural and Lands Departments are always ready and willing to furnish advice on afforestation, as on other subjects within their ken, but up to the present there has not been sufficient specialization in the science of forestry.

LEONARD OWEN TRIPP sworn and examined. (No. 87.)

1. *The Chairman.*] You are the Chairman of the Wellington Acclimatization Society?—Yes.

2. In the South Island we had a good deal of evidence regarding the depredations of deer in the climatic reserves. We also took evidence from the presidents of the various acclimatization societies as to the other view of the question, and we should now like to hear your views on the subject. Do you go into the bush at all?—I go deer-stalking generally every year on the

White Rocks Station, adjoining the Haurangi Reserve, in Wairarapa. Of course, I am aware that deer do bark certain trees, and are very fond of a shrub called "whitewood"—the mahoe. Last April I found on a portion of this property, where we used to get many heads, no deer at all, but the whitewood was coming up again where it had been destroyed. I do not know of my own knowledge that they are doing any damage to the timber-trees. They will eat the shrubs, of course. The deer got very numerous in the district I mentioned, and the owner of the station got permission from the Government to kill them off, and we could see that the deer had gone from the way the mahoe was growing again.

3. Do you think it would be practicable to set apart certain areas of forest country as deer-sanctuaries, confining them to such areas, and shooting all found outside?—I think it would be practicable, but whether you are going to do any good by it is another question. If there are goats and pigs in the forest, why clear only the deer out? You must get rid of all animals. There is no doubt that in the past deer herds ought to have been kept in check. In the Haurangi Reserve there are too many deer, and the acclimatization society last year hired men to go up and shoot a certain number. The settlers have also shot a number; but what we ought to be able to do is: wherever there is a herd getting beyond a certain size, to shoot out any stags with bad heads, or old hinds that are the cause of the deterioration in the herds. If the societies had had the experience fifteen years ago they have now the herds could have been kept in check that way, and if that were done I should not think the deer would do much harm. They will damage orchards and turnip-patches, and in a district like Nelson the question would arise of whether for a certain year the restrictions regarding shooting them should not be taken off altogether.

4. In the vicinity of the Government plantations at Tapanui, and also at Hanmer, the deer are coming down and eating the young trees. What do you think should be done in such a case?—They are fairly easy to scare with a few shots and dogs; but, still, I cannot say that deer do no harm, because they will eat something. On the other hand, they are a considerable advertisement to New Zealand, and there is a large sum of money spent annually here by the many Englishmen and others who come here for the stalking, in addition to the money spent by ourselves.

5. Can you give the Commission any idea of the number of licenses taken out in your district by people who reside outside New Zealand but come here for the sport?—No. I am sorry to say there are not so many this year as in the past, because there is no doubt that in the Haurangi Reserve the herds are deteriorating, because there are too many deer there. When we get the good heads again we will get the stalkers. You can get better heads in Otago than here.

6. Have you anything you wish to add?—I am very interested in the preservation of the native birds. It may not come within the scope of your Commission, but I hope you will recommend that the bush in Canterbury and Otago, as far as possible, should be preserved—not necessarily the timber bush. I know those provinces well, because my home was in Canterbury, and there are numbers of the mokomoko or bell-bird there. Near where my people live there is a reserve, and there are other areas that could be secured for the purpose. It would be a simple matter to obtain them, as there is provision in the Act for the Government to exchange Crown lands for bush for scenic purposes. Also, it is not a question of the country having to find money for the purpose of the reserves in question, because in the districts of Canterbury and Otago the pastoral runs are Crown lands. The Act has been taken advantage of I know, but then it can be taken advantage of in every case where there is a bush concerned. The point is that the taxation is increasing, and if a man has 400 acres of bush country preserved, and his taxation is going up on the land going up in value, he begins to think he must get something out of it.

7. *Dr. Cockayne.*] Do you think there should be no taxation on the land where a piece of bush is preserved by a private owner?—There should be no rates or taxes on such a piece of bush.

8. You are aware that every scenic reserve is now a bird-sanctuary?—Yes.

9. Would that fulfil your purpose?—Well, in order to preserve our reserves they want, of course, much more looking after, and that brings in the matter of expense. My suggestion is that every Rabbit Inspector, every acclimatization society ranger, and every policeman should be instructed to keep an eye on any reserve in his district. What happens now is this: in a certain district there is a reserve, and a man who has got land alongside it will invariably get a burn into it either wilfully or by accident. Then the settler's stock very often finds its way on to that reserve. If the Rabbit Inspector and the local policeman knew that they had an interest in preserving these reserves and birds I think some good would accrue to the Dominion generally. In that way I think we could save the birds.

10. *Mr. Lethbridge.*] We want notices posted up at all the railway-stations as to the reserves, and asking the public to assist in keeping them intact?—Yes. In America the public are educated up to taking great interest in their reserves.

11. *Mr. Clarke.*] You were asked the question as to whether in your opinion reserved areas should be exempt from taxation?—Yes.

12. Supposing such an exemption were enacted, might it not happen that after a man had held for some years a reserved area which had been exempted from rates and taxes he might determine that by clearing the land he could get a greater profit out of it—and by selling the timber off it—than by holding it as a reserve?—That might arise.

13. What guarantee would you impose to prevent such a contingency arising?—I would like to think the matter out. I think you could come to some equitable agreement with the owner that he should not sell the land for a certain number of years.

14. What would the agreement be worth when the timber was down?—There would have to be a bond that he should not cut the timber or sell it for a number of years.

15. If the land escaped taxation for fifteen years would not it cost the State more than it was worth if afterwards it was proposed that the timber should be cut and the land sold to preserve the interests of the community?—It should be done by an Act of Parliament providing that the owner should not sell for a certain number of years after the place was proclaimed a sanctuary. The question wants a lot of consideration, I admit.

GEORGE PERCIVAL NEWTON sworn and examined. (No. 88.)

1. *The Chairman.*] You are the Assistant Under-Secretary of Internal Affairs?—Yes.

2. Can you form any estimate as to what proportion of the licenses issued for deer-stalking are taken out by people residing out of this country?—No, but I could write to the acclimatization societies and ask them for the information.

3. I suppose you are from your position conversant with the complaints from time to time made with regard to the damage done by deer?—Yes.

4. Do those complaints refer chiefly to the artificial plantations and orchards?—Probably, but not altogether. We have had one or two complaints from the Lands Department as to damage done in their State nurseries at Hanmer.

5. I have here some photos showing damage done by deer barking the trees. Would you consider if they were doing damage to that extent in a climatic reserve the value of such reserve would be very seriously minimized?—After seeing these photos I would certainly consider its value would be detrimentally affected. At the same time I do not quite see if the reserve affected is one set apart under the Scenery Preservation Act or the Animals Protection Act how the difficulty is going to be got over as to allowing deer to be shot in that reserve.

6. I appreciate your point, because I understand that firearms are not allowed to be used in these reserves?—Yes; it would necessitate an amendment of the law.

7. *Dr. Cockayne.*] You can shoot in a climatic reserve?—Yes, but not in a scenic reserve under the Animals Protection Act.

8. *Mr. Lethbridge.*] Cannot settlers get permission to shoot where deer are doing damage?—There is a provision in the Animals Protection Act that where animals and birds are doing damage to property the Minister has power to grant authority to destroy such animals or birds then on such property. That is granted on the application of the person concerned. Of course, such sanction would not be given without other inquiries being made. One way is to ask the local acclimatization society to supply the Department with any remarks they desire to make regarding the application. If the evidence in favour of the request is sufficient the Minister almost invariably grants the necessary permission to shoot. I do not know of any case where damage is proved that the permission has not been granted.

9. *Mr. Murdoch.*] For a limited period?—As a rule, three months; but if the damage still continues people can apply for an extension.

10. *Dr. Cockayne.*] Can the Minister now send a man into a scenic reserve to shoot wild cattle?—I doubt it, because under the Scenery Preservation Act I do not think you can take a gun on those reserves.

11. Then it would mean an amendment of the Act in that direction?—Yes. That leads up to the question I heard Mr. Tripp asked, if it would be possible to have the deer confined to certain fixed areas, and if they went outside those areas they could be shot by any one at any time. In connection with that question I might say it would be a very good thing if such an arrangement were possible, but I do not see how it could be arranged, as one of the difficulties would be in the event of a person being found in possession of a deer of his being able to prove where he got it from. It is difficult to see how the matter could be equitably managed without destroying the whole sport. Then, unscrupulous people might send some dogs into a reserve for deer, where they cannot be shot, turn them out of the preserve and then slaughter them indiscriminately just outside the border. The question has become rather an acute one, especially at Rongahere, near Tapanui, where the deer have done a great deal of damage, and where a number of permits have been given to shoot. The acclimatization society were asked to try a bird-scarifier, which it was considered would frighten the deer away, and they proposed to experiment with it. There is no doubt that the whole question, in some of those places where the trouble is acute, must come up for consideration as to the removal of the protection altogether.

12. *Dr. Cockayne.*] That would be equivalent to having no deer-parks or sanctuaries in those districts?—Yes. If you remove the protection off deer in any acclimatization district any one can shoot there.

13. The whole of the Southern Alps will in time be one huge deer-park, and as the deer become a nuisance permission may have to be given to shoot them in a district adjoining a non-shooting area. Would that give rise to a difficulty?—Yes. You are quite right; that is one of the difficulties we have to deal with. With the knowledge we have, and with the wish there is to preserve both the native flora and fauna, there must necessarily be numbers of sanctuaries, and if those sanctuaries were places where no one could go with a gun because of the native birds, but there were deer there, then it means if you want to destroy the deer that the birds also might go. At present the birds are protected in their sanctuaries.

14. But the sanctuary is also for the plants as well as the birds, and if deer are allowed in, such plants as the ribbonwood would be wiped out. Would that be a wise thing to allow?—No, but the thought was only passing through my mind as to the best way to restrict deer within certain areas without their being a nuisance, and I cannot quite see how it can be done. All the power given under the law at present is to destroy them on property when it is found they are committing damage to such property. You cannot drive them off that property and destroy them somewhere else.

15. *The Chairman.*] At present the deer are mostly in inaccessible places, but it is in just those areas where there is bush that the damage is going on, and where it would not be likely to be reported until the damage was almost beyond recall. Have you considered that point?—I see your contention: the more inaccessible the bush-area the more likely you are to have numbers of deer, of course.

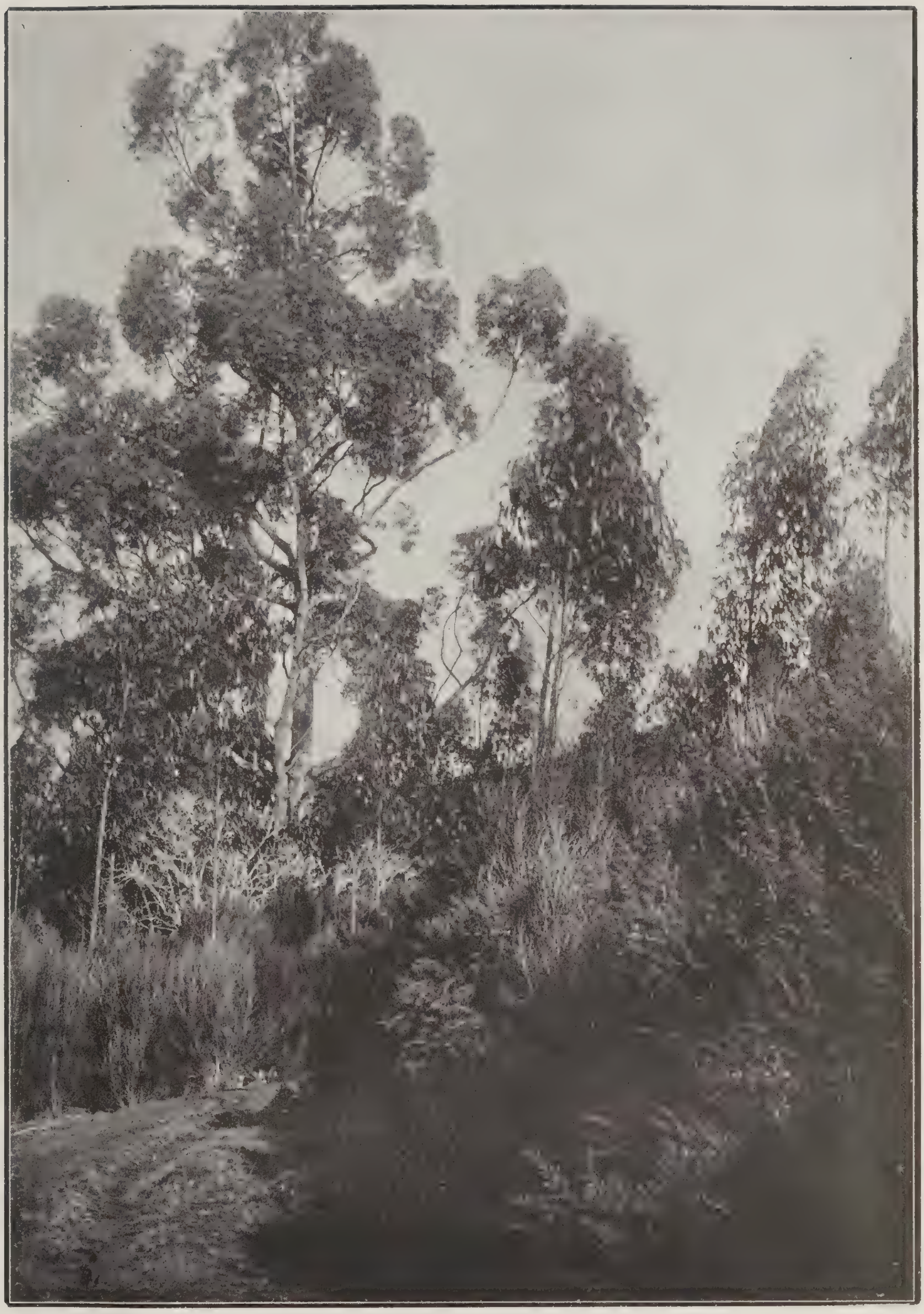
16. *Dr. Cockayne.*] We do not say that the deer will destroy the forest, but they will help to destroy the undergrowth, which is the most important part of the climatic reserves, because that growth is required for water-conservation purposes. If it is destroyed the fire gets in and the reserve is ruined. Have you considered the question from that point of view?—The result you mention is certain to follow if the undergrowth is destroyed.

Approximate Cost of Paper.—Preparation, not given; printing (1,500 copies including maps and illustrations), £165.

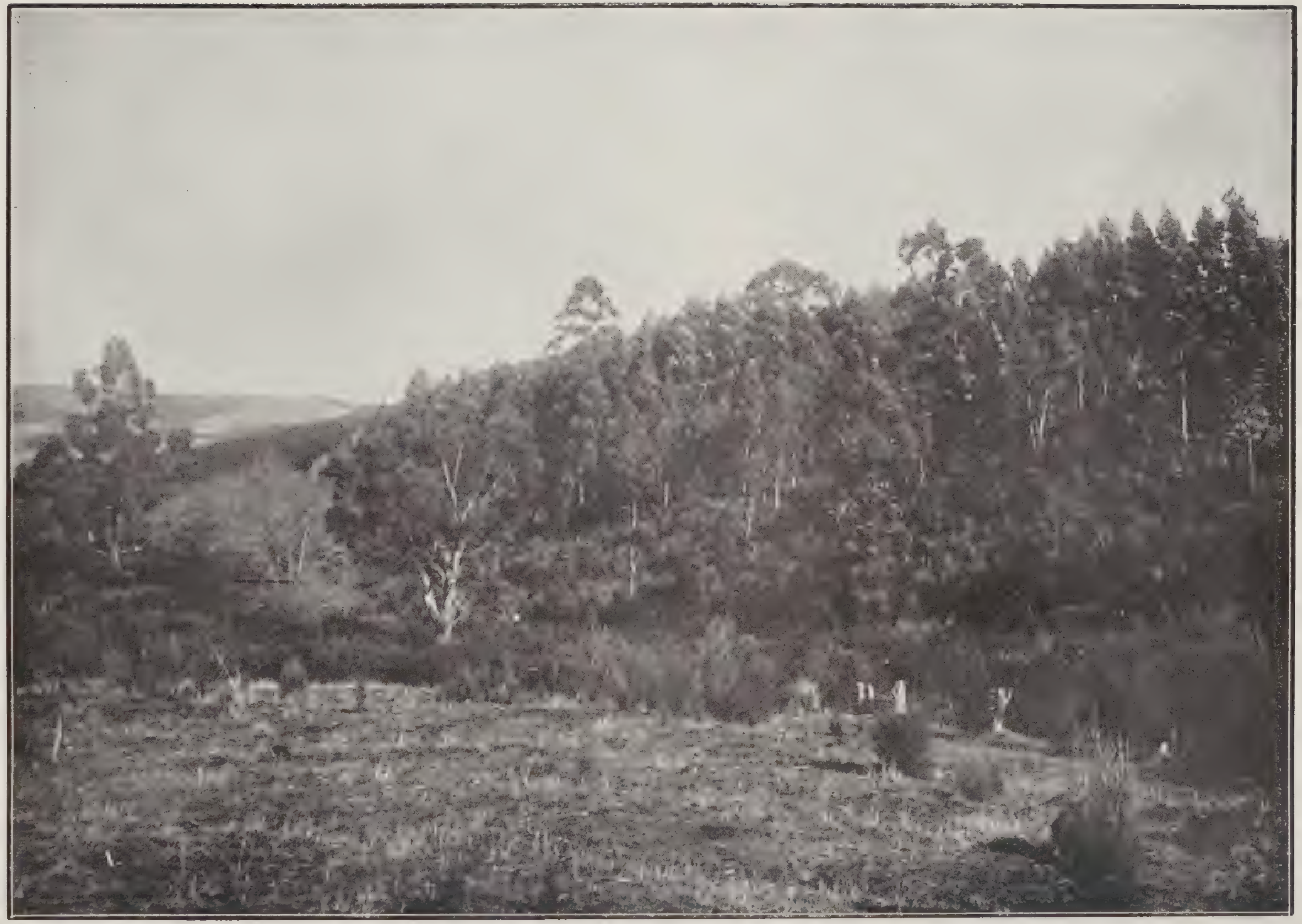
By Authority: JOHN MACKAY, Government Printer, Wellington.—1913.
Price 3s. 6d.

General View of Natural Plantation of Australian Gums at Waitati, Otago.

View of Interior of Natural Plantation of Australian Gums at Waitati, Otago.

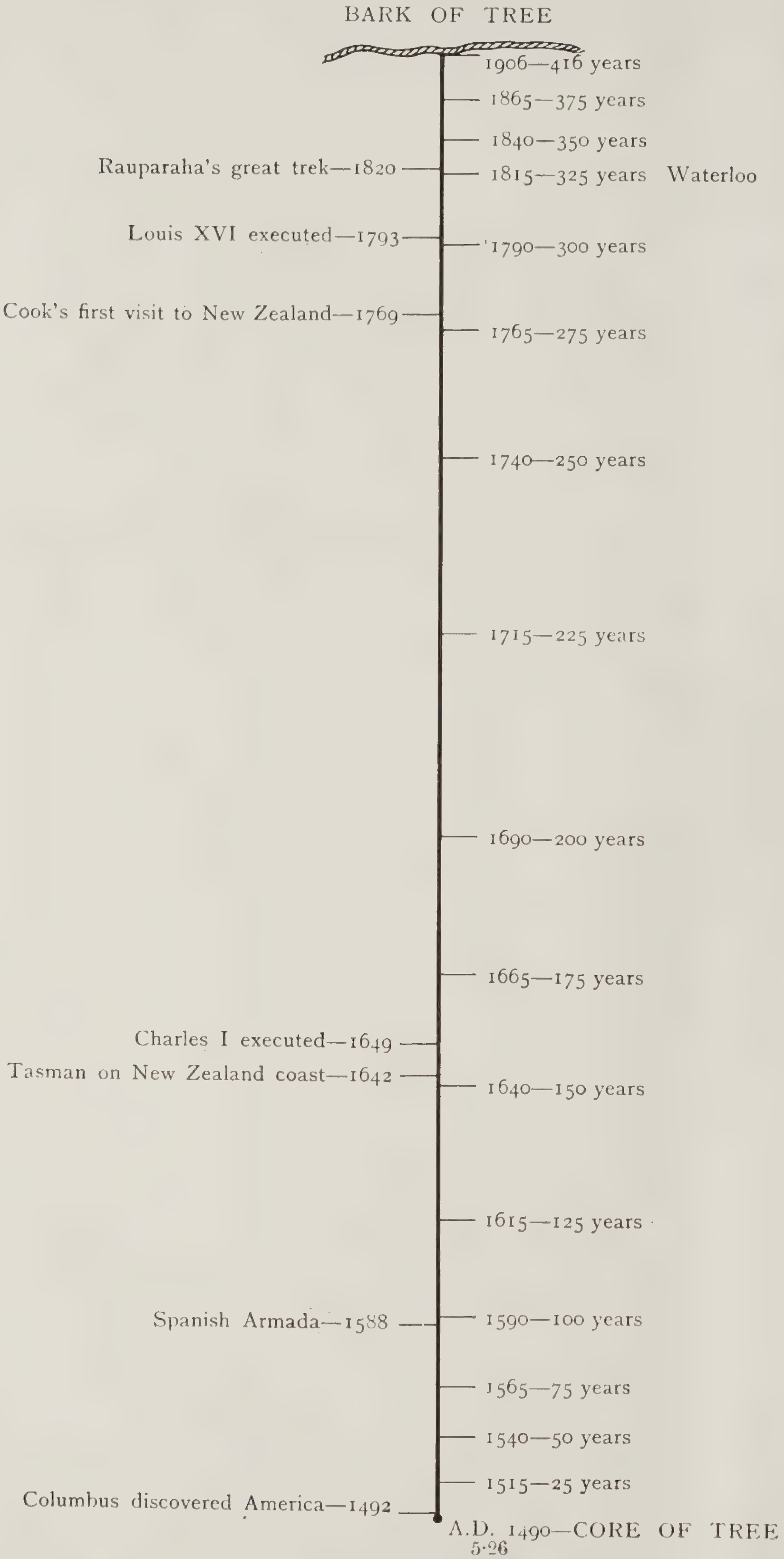


Parent Tree of the Natural Plantation of Australian Gums at Waitati, Otago.



Exterior View of a Natural Plantation of Australian Gums, mainly the Blue-gum, at Waitati, Otago.

Diagram explaining Photo of Transverse Section of Totara Log.



Scale: 1 in. of diagram equals 5·26 of original.

Radius of transverse section of the totara log shown in photo No. 6; length of radius, 4 ft. 2 in. The total age of the tree was 416 years; its diameter was 8 ft.; and two years before the discovery of America it was a seedling. The increment for every twenty-five years is shown on diagram.

Cross-section of Totara Log, 8 Feet in Diameter. Scale, 13·14 times less than original.

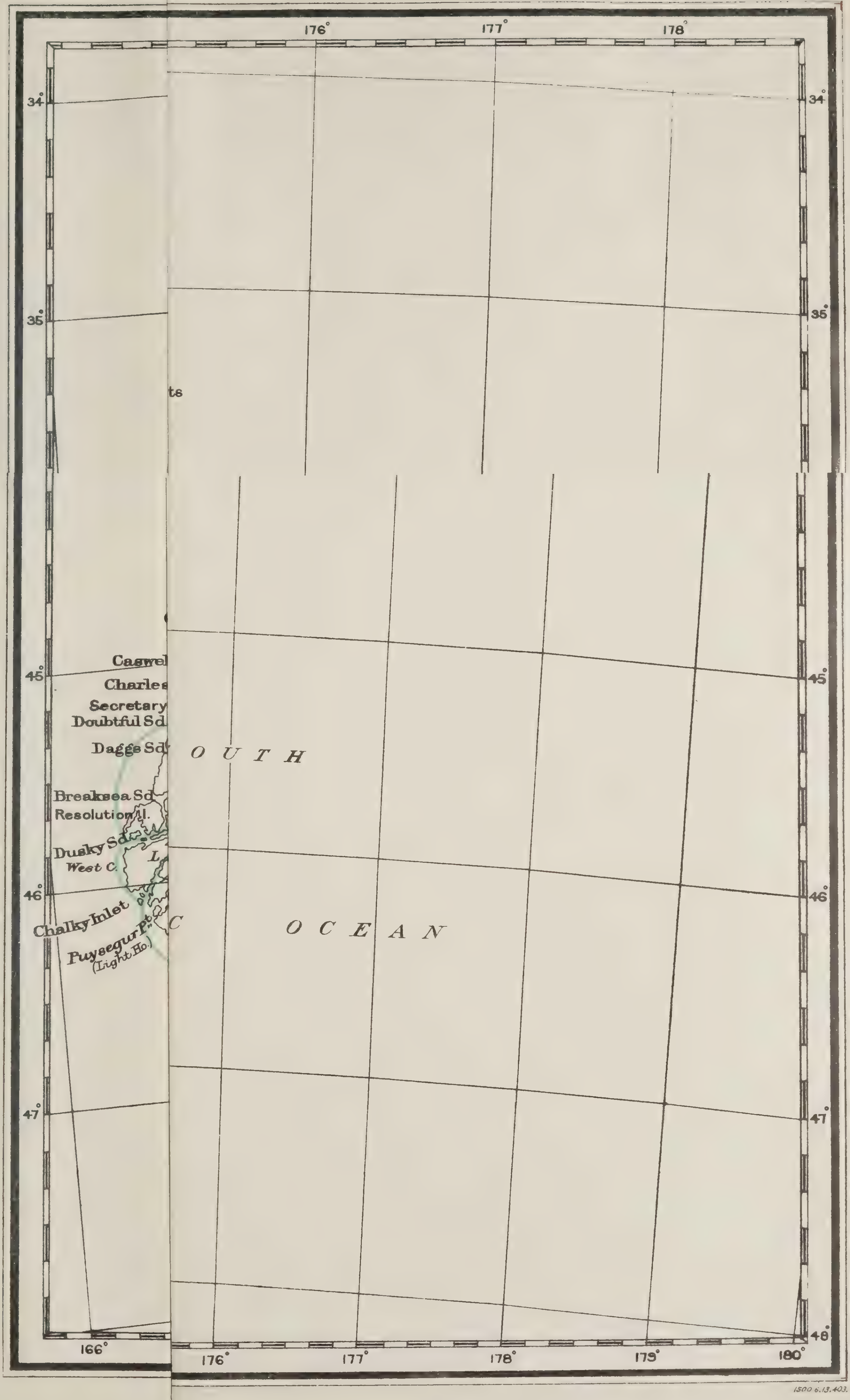
Larch Plantation at Whakarewarewa, Thirteen Years, 32 Feet.

Eucalyptus Sieberiana at Whakarewarewa, Thirteen Years, 45 Feet.

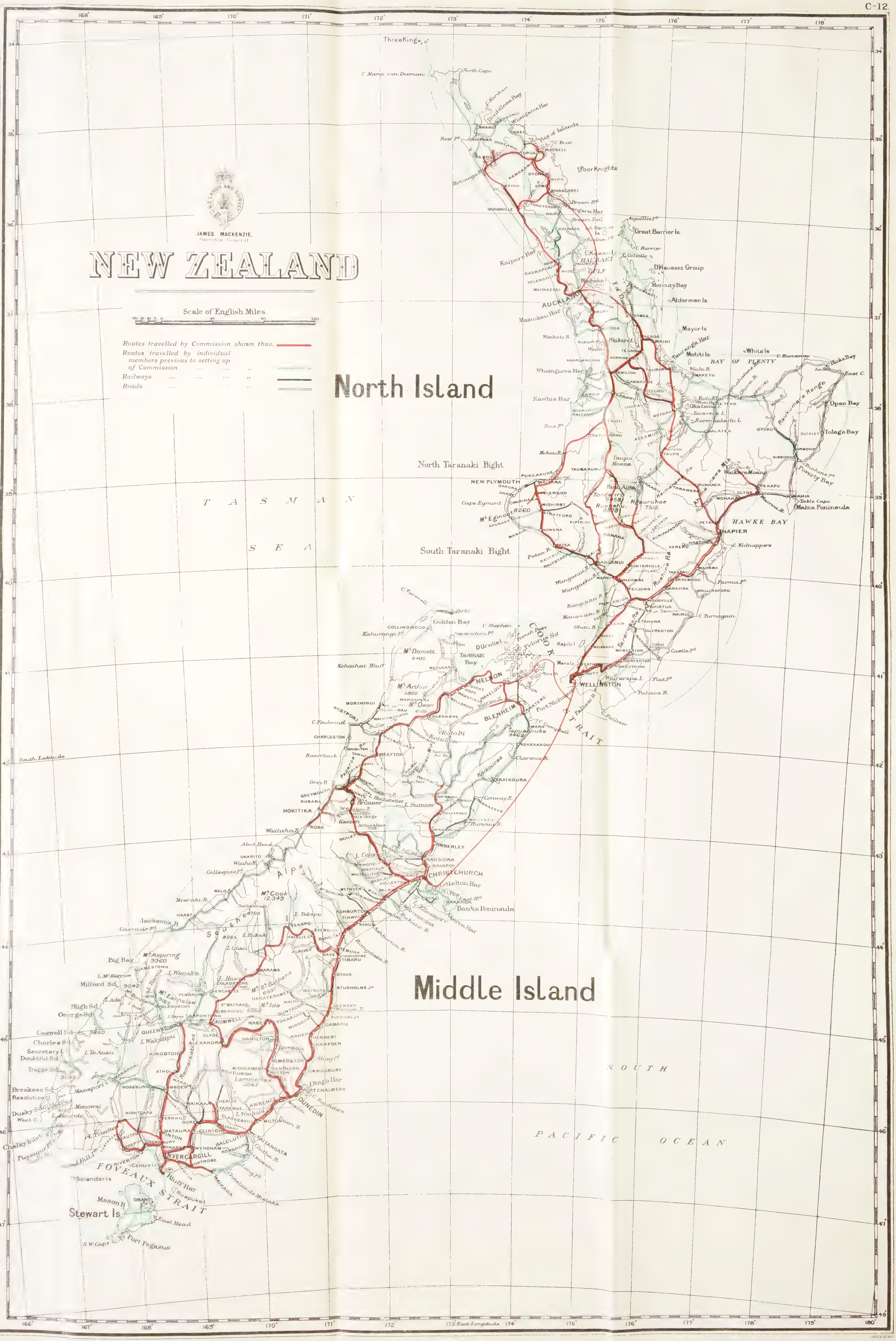
Pinus Laricio at Whakarewarewa, Fourteen Years, 24 Feet.

Pinus radiata at Waiotapu Plantation, Nine Years, 35 Feet.

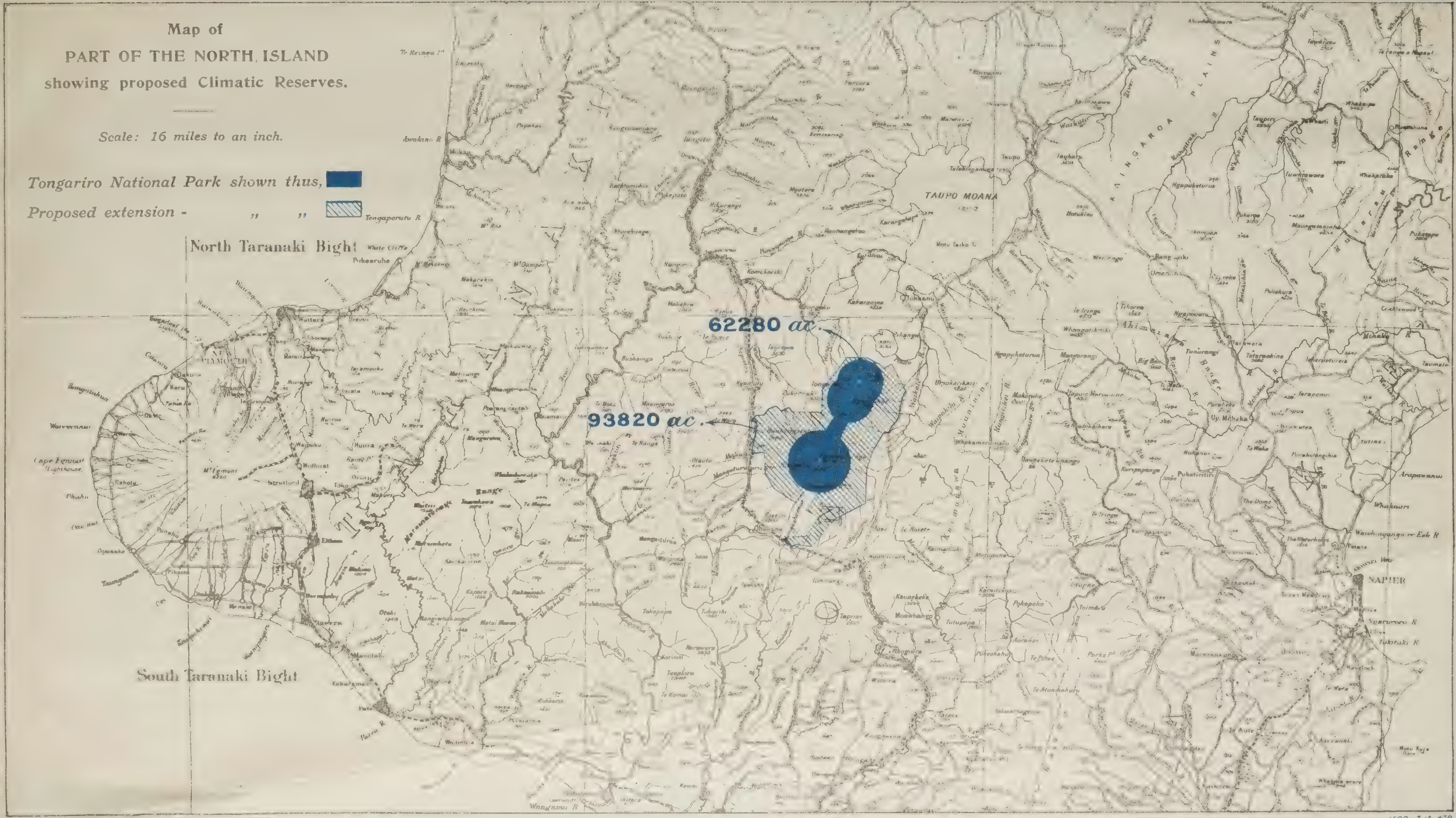
C-12.



1500 6.13.403.



By Authority John Mackay Government Printer

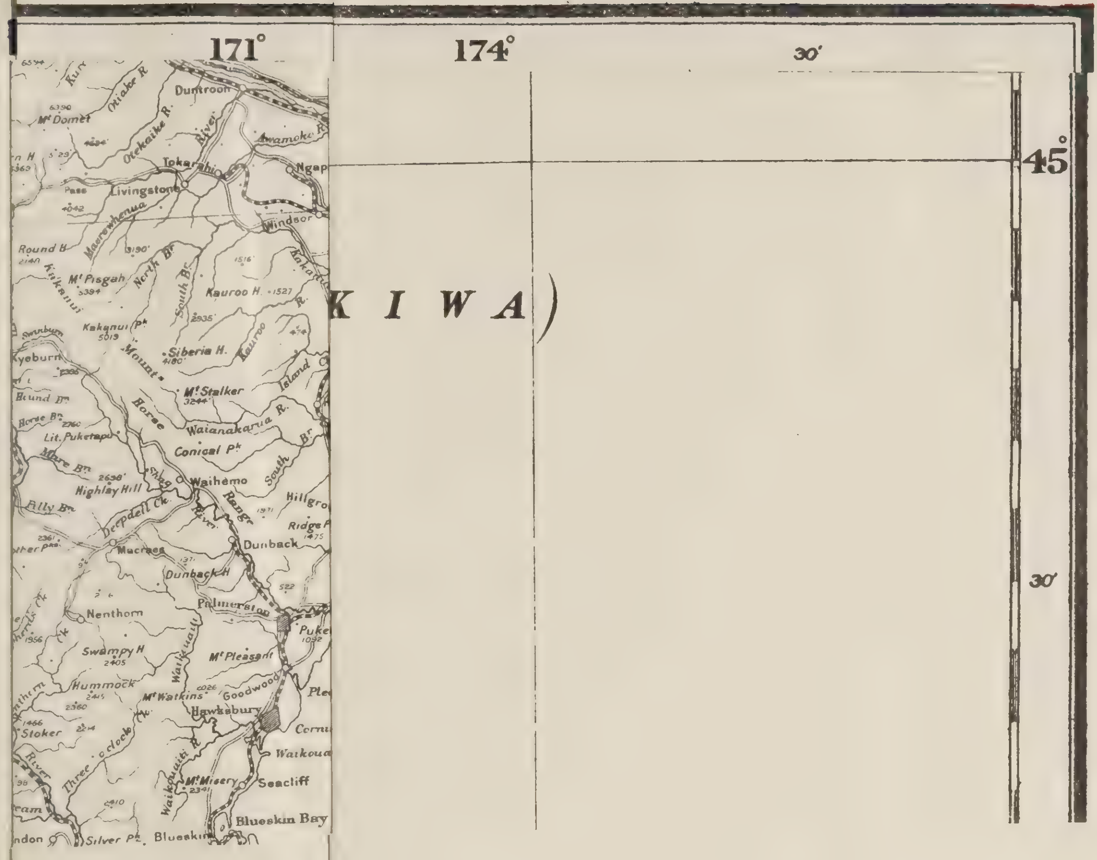


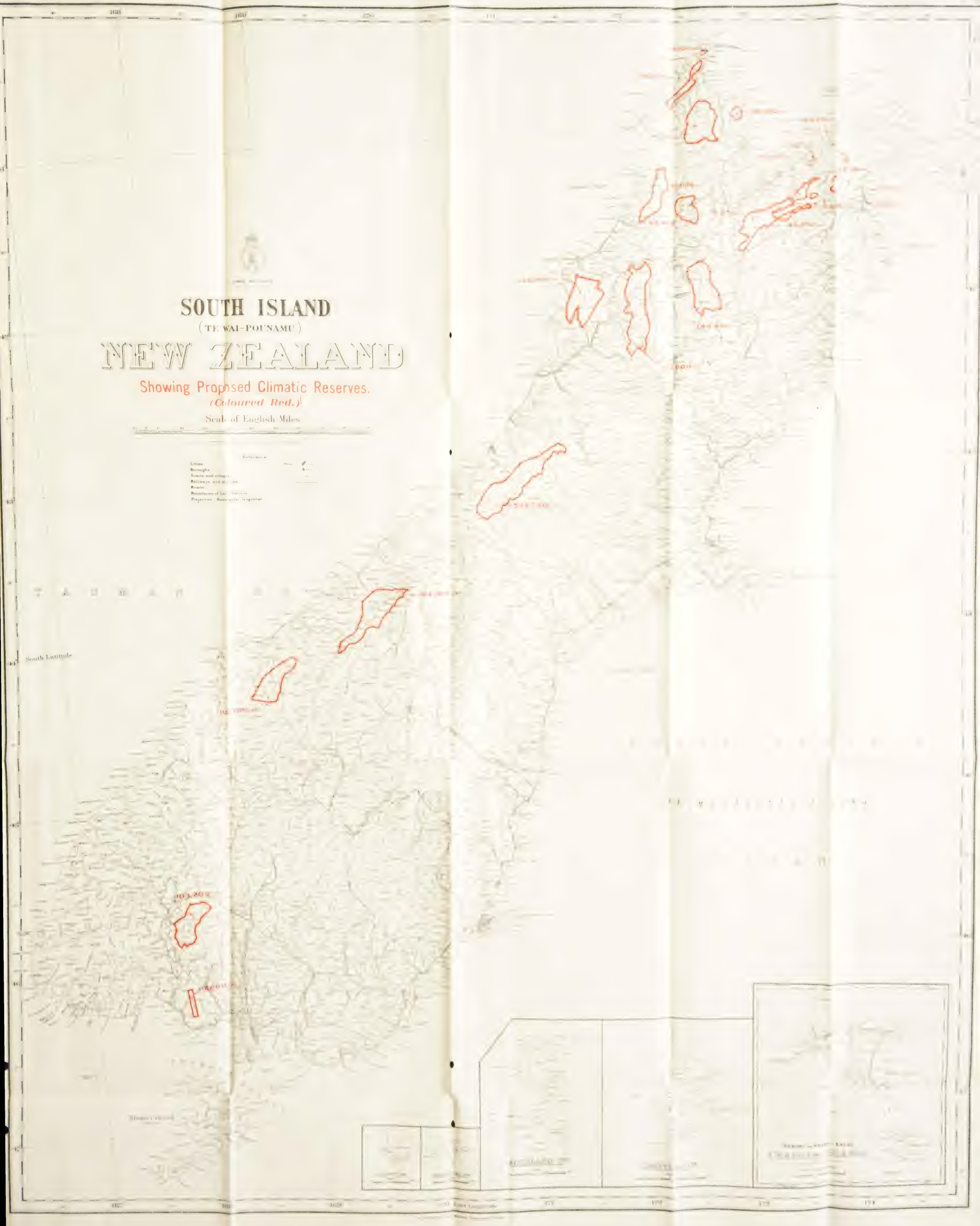
Map of
PART OF THE NORTH ISLAND
showing proposed Climatic Reserves.

Scale: 16 miles to an inch.

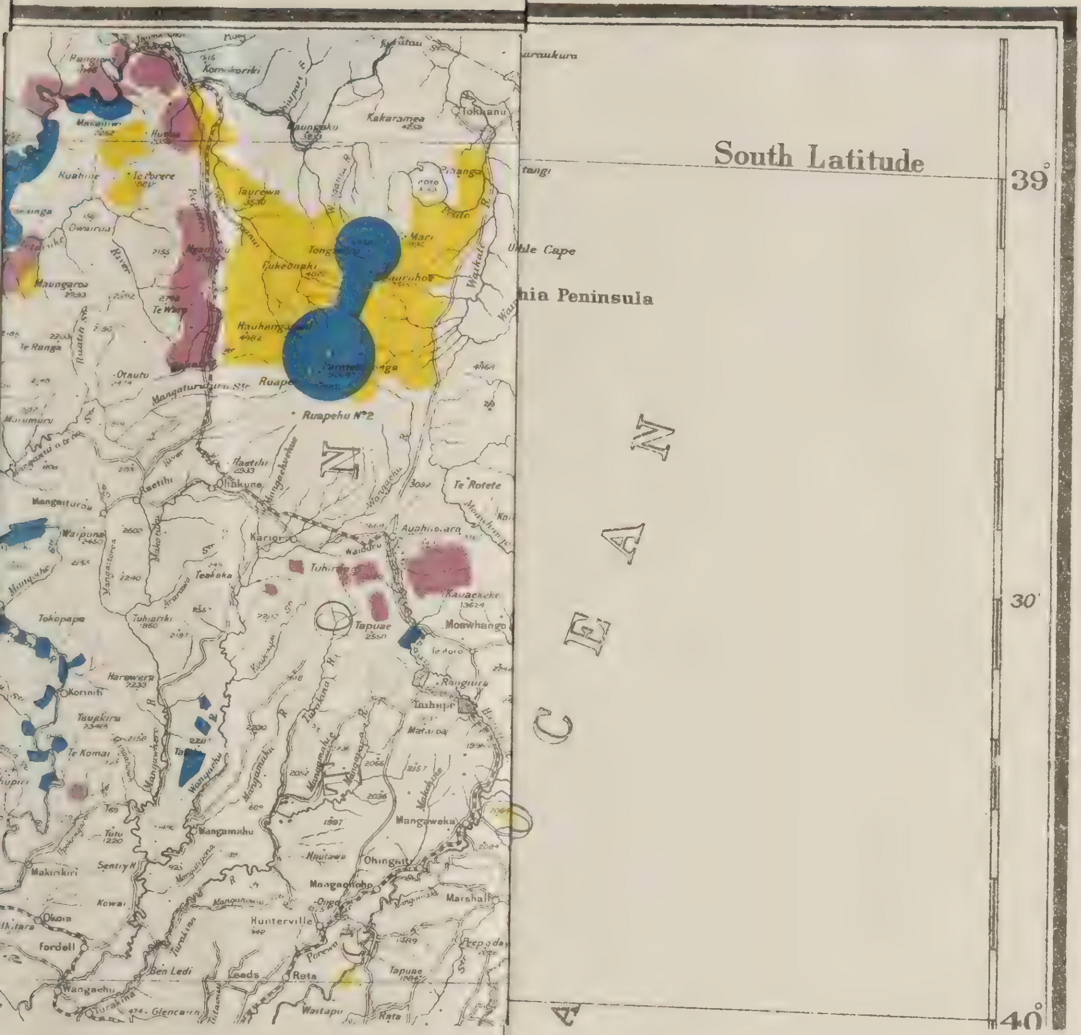
Tongariro National Park shown thus, ■

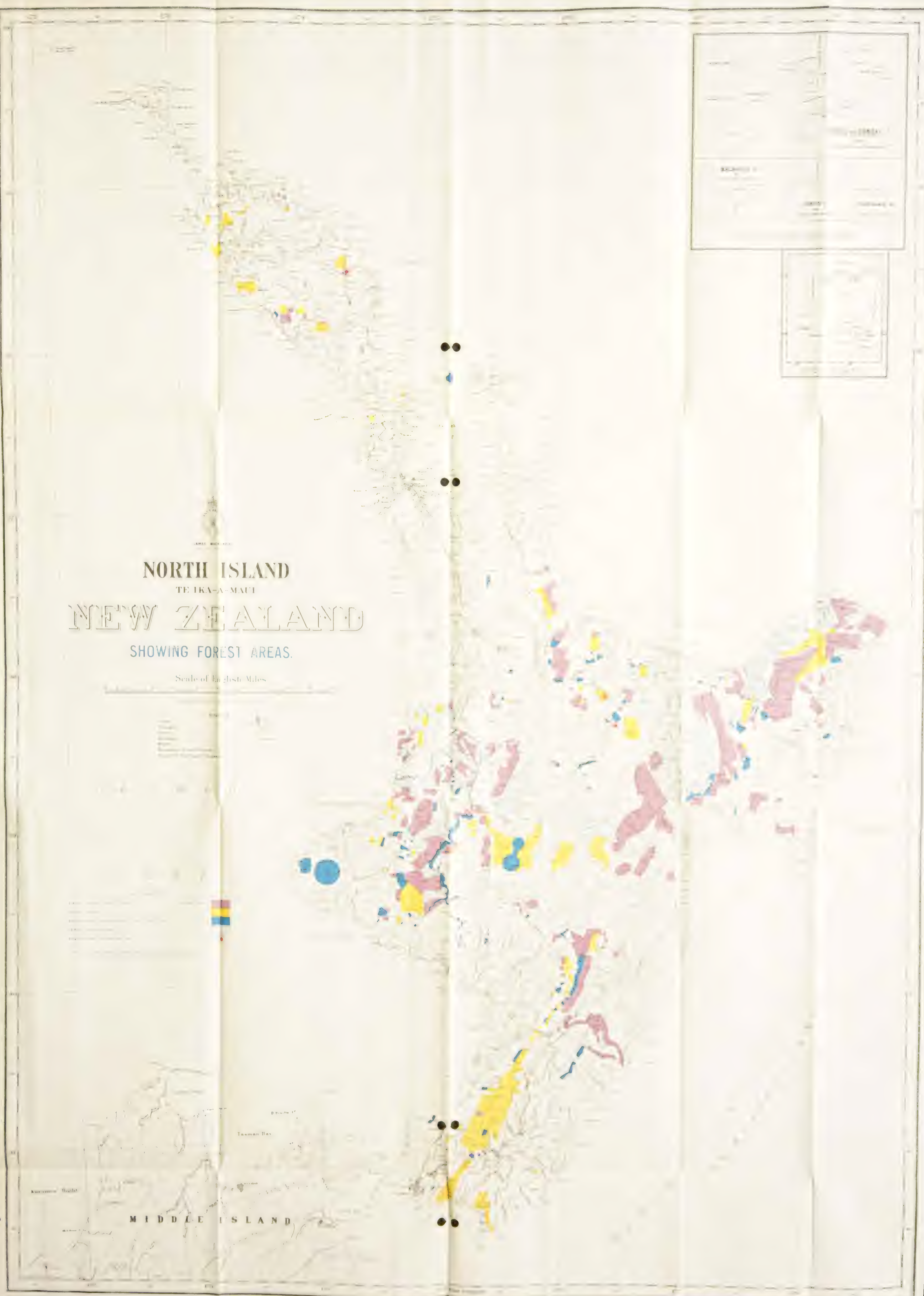
Proposed extension - " " ▨


171°
174°
30'
45°
30'
K I W A)
Duntroon
Otekaike R.
Otiake R.
Mt Domet
Tokarahi
Livingstone
Maerewhenua
River
Awamoko R.
Windsor
Pass
Round H.
Mt Pisgah
Kakanui
North Br.
South Br.
Kauroo H.
Kakanui Pk.
Siberia H.
Kauroo R.
Mount
Mt Stalker
Island Ck.
Kyeburn
Horse
Lit. Puketapu
Waianakarua R.
South Br.
Conical Pk.
Waihemo
Highlay Hill
Range
Deepdell Ck.
Hillgrove
Ridge
Dunback
Macraes
Dunback H.
Palmerston
Nenthorn
Swampy H.
Mt Pleasant
Waikouaiti
Hummock
Mt Watkins
Goodwood
Hawksbury
Stoker
Three o'clock Ck.
Waikouaiti R.
Waikouaiti
Mt Misery
Seacliff
Blueskin Bay
Silver Pk.
Blueskin



SOUTH ISLAND
(TE WAI-POUNAMU)
NEW ZEALAND
Showing Proposed Climatic Reserves.
(Coloured Red.)


South Latitude
39°
30'
40°
OCEAN
Tokaanu
Kakaramea
Pihanga
Tongariro
Ngauruhoe
Ruapehu
Ruapehu No. 2
Hauhungatahi
Taurewa
Makokoriki
Ruahine
Owhango
Maungaroa
Te Ranga
Otautu
Mangaturuturu Str.
Raetihi
Ohakune
Karioi
Tohunga
Waiouru
Auahitotara
Te Rotete
Kauaeroa
Moawhango
Tapuae
Tuhiariki
Teakaka
Waipuna
Mangaiturua
Tokopapa
Harewera
Korinihi
Tuugkiru
Te Komai
Tutu
Makirikiri
Sentry Hill
Kowai
Okoia
Fordell
Wangaehu
Glencairn
Ben Ledi
Leeds
Rata
Waitapu
Hunterville
Ongo
Mangaonoho
Ohingaiti
Hautawa
Mangaweka
Mataroa
Ruahine
Marshall
Utiku
Taihape
Rangitire
Kangamahu
Mataroa
Mahia Peninsula
Table Cape
Waipuke



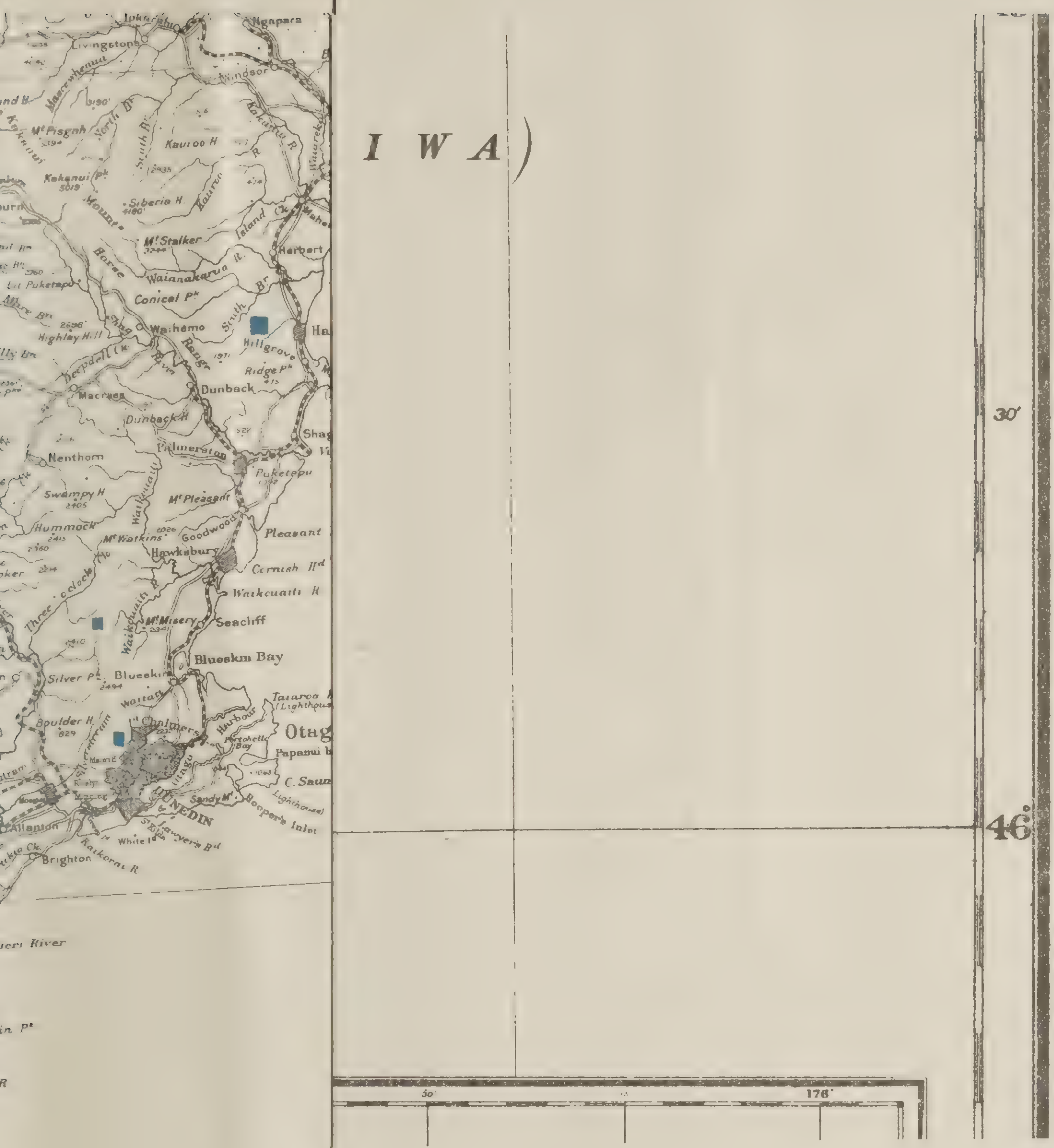
NORTH ISLAND

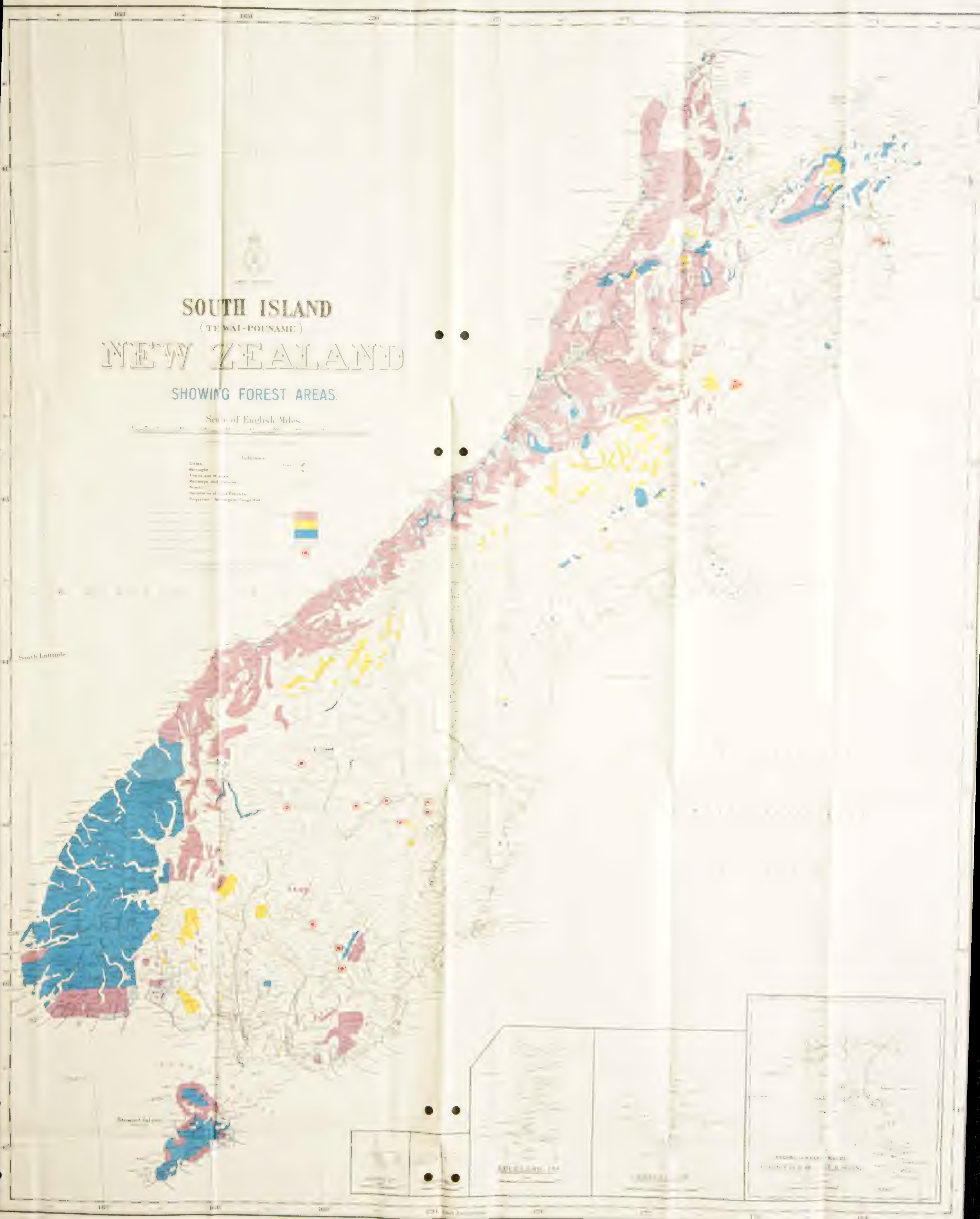
TE IKA-A-MAUI

NEW ZEALAND

SHOWING FOREST AREAS.

Scale of English Miles


I W A)
Ngapara
Livingstone
Windsor
Mt Pisgah
Kauroo H
Kakanui Pk
Siberia H.
Mt Stalker
Herbert
Conical Pk
Waihemo
Highlay Hill
Hillgrove
Ridge Pk
Dunback
Macraes
Dunback H
Shag
Palmerston
Nenthorn
Puketapu
Swampy H
Mt Pleasant
Hummock
Mt Watkins
Goodwood
Pleasant
Hawksbury
Cornish Hd
Waikouaiti R
Mt Misery
Seacliff
Blueskin Bay
Silver Pk
Blueskin
Waitati
Taiaroa
(Lighthouse)
Boulder H.
Chalmers
Harbour
Portobello Bay
Otag
Papanui
C. Saun
DUNEDIN
Sandy Mt
Lighthouse
Hooper's Inlet
Allanton
White Id
Lawyers Hd
Brighton
Kaikorai R
River
Pt
R
30'
46°
30'
176°



SOUTH ISLAND
(TE WAI-POUNAMU)
NEW ZEALAND
SHOWING FOREST AREAS.

1913.
NEW ZEALAND.

ELDERSLIE ESTATE No. 2

(PARTICULARS RELATIVE TO PURCHASE AND SETTLEMENT OF).

Return to an Order of the House of Representatives dated the 1st August, 1913.

Ordered, "That there be laid before this House a return showing—(1) The total area of the Elderslie Estate No. 2, recently purchased by the State for closer settlement; (2) the price per acre paid for the same by the State; (3) the Government valuation of the same for taxation purposes at the time of purchase; (4) the number of sections not applied for at the time of ballot; (5) the terms for which those sections not applied for were vacant; (6) the loss to the State from such vacant sections; and (7) the total amount the whole block was loaded with."—(Mr. CLARK.)

ELDERSLIE ESTATE No. 2.

(1.) Total area purchased: 1,671 acres.

(2.) Price per acre paid for the same by the State: £20.

(3.) The Government valuation of the same for taxation purposes at the time of the purchase: Capital value, £13,180; unimproved value, £11,200; improvements, £1,980. (Valuation made in 1909—apportioned.)

(4.) The number of sections not applied for at the time of ballot: Three.

(5.) The terms for which those sections not applied for were vacant: 108 days in each case.

(6.) The loss to the State from such vacant sections: £181 7s. 1d. (rental).

(7.) The total amount the whole block was loaded with: £6,300.

Approximate Cost of Paper.—Preparation, not given; printing (1,400 copies), 15s.

By Authority: JOHN MACKAY, Government Printer, Wellington.—1913.
Price 3d.

1913.
NEW ZEALAND.

TONGOIO ESTATE:

PARTICULARS RELATIVE TO LEASES, AND AREA OF BLACKBERRY ON EACH SECTION.

Return to an Order of the House of Representatives dated the 23rd September, 1913.

Ordered, "That there be laid before this House a return showing—(1) The name of each lessee of a section on the Tongoio Estate; (2) the area he leases; (3) the rent he pays; and (4) the area of blackberry on each section."—(Mr. Brown.)

TONGOIO SETTLEMENT: RETURN SHOWING THE NAME OF EACH LESSEE OF A SECTION OF THE TONGOIO ESTATE; THE AREA HE LEASES; THE RENT HE PAYS; AND THE AREA OF BLACKBERRY ON EACH SECTION.

Name of Lessee.	Section.	Block.	Survey District.	Area.			Annual Rental payable.			Area of Blackberry.
				A.	R.	P.	£	s.	d.	Acres.
Lowe, C. E. (Mrs.) ...	3	I	Tongoio ...	983	3	0	324	9	0	21
Mahoney, F. O'C. ...	4	I	" ...	761	0	0	251	2	0	11
Broome, William ...	5	I	" ...	520	2	0	165	12	0	50
Saddler, Alexander ...	6	I	" ...	370	0	0	122	8	0	105
Osborne, A. M. (Mrs.) ...	7	I	" ...	287	2	0	103	19	0	120
Kennedy, S.	8 6	I IV	" ... Puketapu ...	849	1	0	248	17	0	166
Lowe, J. N.	10	I	Tongoio ...	742	1	0	199	16	0	6½
Ford, A. W.	11	I	" ...	967	0	0	289	7	0	42
Bulcock, W. H. ...	12	I	" ...	484	1	0	177	15	0	46
Harris, G. P. ...	4	IV	Puketapu ...	782	2	0	229	10	0	18
O'Reilly, W. C. ...	5	IV	" ...	796	1	0	262	16	0	300
Not leased	9	I	Tongoio ...	867	0	10	...			68

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1913.
NEW ZEALAND.

WANGANUI RIVER TRUST

(ANNUAL REPORT OF THE).

Presented to both Houses of the General Assembly by Command of His Excellency.

MEMBERS.—T. D. Cummins, Government nominee (Chairman); G. V. Pearce, M.P., Patea; W. A. Veitch, M.P., Wanganui; W. J. Polson, Chairman, Wanganui County Council; W. Ritchie, Chairman, Waitotara County Council; C. E. Mackay, Mayor of Wanganui; David McFarlane, President, Chamber of Commerce; J. T. Stewart, W. G. Bassett, and T. B. Williams, elected by the ratepayers of Wanganui.

REPORT.

SIR,— Wanganui, 20th April, 1913.

I have pleasure in furnishing you with a report of the operations of the Trust for the year ended the 31st March, as well as notes taken on a visit of inspection commenced on the 12th April.

Following my usual practice in visiting the river for the purposes of making my annual report I endeavoured to catch the river at a low level, so that the improvements effected during the past year and the necessary works to be undertaken next working season could be noted.

I left Wanganui by the steamer "Ohura" for Pipiriki on the 12th April. The water-gauge at Hatrick's Wharf at Pipiriki showed 36 in. below "the mark"—a zero established by Messrs. Hatrick at the inception of the steamer service, and at which level local steamers could safely reach Pipiriki—this before the river improvements were commenced. The 36 in. referred to was the lowest level found this year (1st April, 1912, to 31st March, 1913). The steamer had about forty passengers and a full load of cargo, and, despite the low conditions of the river and a full cargo, no difficulties were experienced in the navigation. We reached Pipiriki at 5.30 p.m. simultaneously with the s.s. "Wakapai," also passenger- and cargo-laden from Wanganui. It was noticeable with both steamers that the major portion of the cargo and most of the passengers were for wayside ports, thus showing the importance of the service in assisting settlement on lands adjacent to the river—the passengers being mainly settlers, bushfellers, and roadmen; the cargo being fencing and building material, tools, and provisions.

The conditions of the river gave an excellent opportunity of noting the work accomplished this working season below Pipiriki, consisting of clearing the channel of obstructions, renewing shingle and wire-net walls with stone, and lengthening stone walls at Tupapa (235), Ohaoa (232), and Matahiwi (212), and at several points snags and a few large boulders that will require removal later, notably between Parikino and Upokopoito (Nos. 232 to 238). At Upokopoito the shingle island in mid-channel is increasing in width and height. Willows have taken root and will hold the shingle, and should be at once eradicated, as by their growth the island will be still further enlarged and will be, in case of severe floods, a menace to the adjoining lands on the right bank. It would be of advantage to lengthen the tail of the wall from the island: this would have the effect of scouring away the shingle-bank now forming at the foot of the wall on the right bank and make easier entrance for steamers to the Upokopoito Rapid. The work below Pipiriki will in the future be more in the nature of maintenance.

On Sunday night while I was at Pipiriki it rained heavily, and the river had risen over a foot on Monday morning when I left for Taumarunui *via* the houseboat, and from Pipiriki on to the houseboat the river was steadily rising. This was specially unfortunate, as it completely negatived any possibility of noting the works, as the walls were completely covered. Leaving the houseboat the following morning for Taumarunui, the river was still too much in flood to allow me to take notes of any value, and this continued till I reached Taumarunui.

At Taumarunui I was joined by Mr. W. J. Polson, Chairman of the Wanganui County Council, a member of the Trust. Leaving Taumarunui on the 17th by launch for Pipiriki, we found the river had fallen somewhat and the walls were showing up, although the conditions were not of the best for noting future necessary works. It was pleasing, however, to observe that, with the exception of a few places where the shingle had scoured and dropped the walls, they were doing excellent work, not only by scouring on the rapids, but by lifting the water on the shallows behind the rapids. Occasionally it was noticed that in places the wire netting had been torn off the walls by floating timber in flood-time. These torn places are easy to repair, and will be taken in hand at once.

We found two parties at work, one at Turangahoru (No. 5) repairing and extending a shingle and wire-net wall from the left bank, and a second party at Otutekawa (69) constructing a new wall of shingle and wire netting from the left bank. After completion of this work and repairs to netting on the tops of several walls the work will be shut down for the winter months.

The foreman of works, Captain Allan Marshall, again urged the necessity of procuring a fully equipped motor-launch. This matter has been fully referred to in previous reports. It is estimated that such a vessel will amply justify the cost of construction, which will be about £1,250. The estimates last session of the House provided £500 towards the construction of a launch. A further sum asked to be placed on the supplementary estimates did not, however, appear, and the Trust decided to allow the sum voted to lapse, and to ask for a sum of £1,250 to be placed on the estimates in the approaching session for the purpose indicated.

With the works now in hand and proposed for the ensuing year it is necessary that a vote of not less than £1,000 be passed, as well as £1,250 previously referred to for procuring a launch; and an additional sum of £150 for the roading of the lands on the left bank of the river that have been recently leased, and for which the subsidy of £315 10s. was passed at last session of the House and found, on investigation, short of requirements. The votes therefore asked for by the Trust are as follows: For new work and maintenance, £1,000; for launch, £1,250; for roading, £150.

I have little doubt that with the approaching completion of the major portion of the improvement-work on the river, and the fact that the waste lands that are not of value for scenic purposes are coming into profit and will be an important factor for revenue-producing purposes, and that in the near future it may not be necessary to make application for subsidy to the extent it has been in the past, will all commend the desirability of making the appropriations as suggested.

I furnish herewith schedule of works completed and in progress for the year ended 31st March, 1913:—

Walls and Groynes.—No. 1, Ngahuinga: Shingle and wire-net wall from right bank repaired. No. 16, Tauteti: Walls repaired, left bank and additional shingle and wire-net wall constructed. No. 22, Hikamutu: New shingle and wire-net wall from left bank. No. 23, Tikataka: Shingle and wire-net wall extended from right bank. No. 26, Omaka: Repairs to shingle and wire-net wall right bank. No. 2, Auhauora No. 2: Repairs to shingle and wire-net wall. No. 212, Matakiwi: Extension of stone walls from right and left banks. No. 230, Te Rimu: Repairs and extension of stone walls from left bank. No. 232, Ohaoa: New stone wall from right bank.

Landings.—Kokakonui (in progress); Tawhata (completed); Kokakoriri (in progress).

Blasting and Removal of Boulders.—Large numbers of boulders have been removed from mid-channel throughout the length of the river.

Snagging.—The removal of snags is not the important matter it was in the early history of the work. Removals now are mainly vagrant snags deposited during freshets and floods. Attention has been given to this.

New Punt.—A new punt has been built, mainly for carrying shingle and small stones for repairs to walls.

Captain Allan Marshall (Trust's foreman) has again amply demonstrated his ability in dealing with the improvement and maintenance works.

In conclusion, I would like to say that the river-channel from Taumarunui to Wanganui, a distance of 144 miles, is in excellent condition; that the steamer service has been continued during the past year without interruption; and that cargo and passenger traffic is increasing.

I forward with this a booklet showing the numbers, names, and descriptions of the rapids on the river, commencing from its junction with the Ongarue and ending at Wanganui; also showing where walls have been constructed and other important works undertaken, with a general compendium of necessary works required to be undertaken in the future.

I am, &c.,
The Under-Secretary for Lands, Wellington. T. D. CUMMINS, Chairman.

SCHEDULE SHOWING NUMBERS, NAMES, AND DESCRIPTIONS OF RAPIDS AND SHALLOWS, ALSO TRAINING-WALLS CONSTRUCTED AND REQUIRED.

(Commencing from Taumarunui and ending at the River Trust's jurisdiction at Kaurapoa Stream, about 14 miles from Wanganui.)

Hatrick and Co.'s wharf in the Ongarue River, Taumarunui (144 miles from Wanganui). Below the above and before reaching the junction with the Wanganui River, not named or numbered, there are three walls on the left and one on the right bank of the Ongarue constructed of shingle enclosed in wire netting.

No. Ongarue joins Wanganui River.

1. Ngahuinga.—Shingle and wire-net walls from right and left banks.
2. Pungahuru No. 1.—Shingle and wire-net walls from right and left banks.
3. Pungahuru No. 2.—Shingle and wire-net walls from right and left banks.
4. Rurumakatea.—Good channel; shingle and wire-net wall left bank.

No.

5. Turangahoru.—Shingle and wire-net walls from right and left boulder-point on the right bank.
6. Te Miro.—Short swift run; channel right bank, stony bed left bank.
7. Tunakotikoti No. 1.—Swift runs; papa reef right bank, shingle-bed left bank; stone wall from left bank.
8. Tunakotikoti No. 2.—Swift runs; papa reef right bank, shingle-bed left bank; stone wall from left bank.
9. Pokongaruru.—Swift run and shallow above; shingle and wire-net walls from both banks; boulders to remove from channel.
10. Paehou.—Moderate run; a large quantity of boulders have been blasted and removed from this rapid, as also from 11 to 13.

    Reach.—Stream on left bank.

11. Kokirae.—Long swift run; some large boulders on left bank; boulders to remove.

    Reach.

12. Pokaka.—Swift run; large boulders on left bank; boulders to remove.
13. Whakatarino.—Long swift run; channel right bank (may want wall).

    Reach.—A stream on right bank at upper end.

14. Towhenua.—Long, swift, rough run; shingle and wire-net wall right bank. A large quantity of the papa reef has been blasted and removed from this rapid.
15. Rakauwhakamatuku.—Stone wall from right bank and wire-net and shingle wall from left bank. A papa reef has been removed from channel. Wall required between Nos. 15 and 16 from right bank.
16. Tauteti.—Swift run with sharp turn round boulders; two shingle and wire-net walls from left bank and one from right bank. A large quantity of boulders have been blasted and removed from a point on the right bank. This has been one of the most troublesome places on the river, and has cost much time and money. It may yet be necessary to remove the boulder-point on the right bank, but there is a possibility, if this is done, of dropping the level of the water behind the rapid to disadvantage.
17. Porokurangi.—Swift run; boulders left bank, shingle-bed right bank; shingle and wire-net wall from right bank. A large number of boulders have been blasted out and removed from the channel from Tauteti on to the next rapid below (Wairere). Wall required from left bank.
18. Wairere.—Swift run; large boulders here; shingle-bed right bank; shingle and wire-net wall from right bank.

    Reach.—Kahikatea-trees on right bank.

19. Pataaua.—Broad, swift, shallow run; shingle and wire-net walls from both banks.

    Reach.

20. Raparua.—Swift run; large boulders here on left bank; large stream on left bank; shingle and wire-net walls from both banks.

    Reach.

21. Tapuirangi.—Moderate run.

    Reach.

22. Hikamutu.—Swift shallow run; shingle and wire-net walls from both banks.
23. Titakataka.—Swift run; a large stream on left bank; shingle and wire-net walls from both banks.

    Short reach.

24. Tehoroaporoaki.—Swift run; shingle and wire-net wall right bank. Large boulders have been blasted and removed from channel above and below; wall required from left bank.
25. Kaka.—Moderate run.
26. Omaka.—Swift run; flat papa reef left bank, an old kainga (Omaka) on right bank; shingle and wire-net wall on left bank.

    Reach.—Originally a wall was constructed in mid-stream on the papa reef: this has since been removed. The great scour here caused the first wall put in to sink; it is now resting on the papa, and a new wall has been constructed on top. Tnis previously troublesome place is now a good channel.

27. Auhauroa No. 1.—Long run; wall of shingle and wire netting from right bank. A large number of boulders have been blasted and removed.
28. Auhauroa No. 2.—Similar to No. 1.

    Reach.

29. Kohatupiko.—Moderate run. A quantity of large boulders have been blasted and removed.

    Reach.—A quantity of boulders have been removed by blasting.

30. Te Onepoto.—Swift run; boulders have been blasted and removed; a clump of kahikatea-trees on left bank; stones to remove.

    Reach.

31. Manawanawa.—Swift run, broad and shallow; boulders removed; some more should come out.

    Reach.

No.

32. Te Whakarae.—Swift run; channel at right bank at papa reef in water. A portion of the papa reef on the right bank has been cut off to widen the channel.

Short reach.

33. Pouwhakamaru.—Swift run; boulders have been removed; two shingle and wire-net walls from right bank, and one from left bank.
34. Onetapo.—Channel right bank at papa reef; swift run; large shingle-bed at left bank with big boulder at upper end.

Reach.

35. Motutara.—Moderate run; may require wall in future, probably from right bank.
36. Te Hinau.—Old kainga and stream (Motutara) on right bank; moderate run; may require training-wall in future.
37. Te Maire (132 miles from Wanganui).—Channel right bank, broad shallow run; in shallow above training-wall may be required.

Reach.—Te Maire Stream and old kainga (Te Maire) left bank.

38. Te-rua-a-te-namu No. 1.—Rather shallow; stones have been cleared from channel.
39. Te-rua-a-te-namu No. 2.—Similar to No. 1. It is possible that walls would benefit, as the runs are shallow.
40. Te Rata.—There are large boulders in the river here, but they do not interfere with navigation; some of the smaller ones might be removed with advantage.

Good reach.

41. Otukitare.—At top of the shingle island; swift run; channel right bank.
42. Matawhero.—A long rapid; channel on right bank; swift run; a large shingle-bank or island on left bank; a stream (Matawhero) on right bank.

Reach.—Some large boulders in river.

43. Marekura No. 1.—Fairly swift run; small papa reef in channel has been cut out; a papa ledge on left bank.
44. Marekura No. 2.—Moderate run.
45. Otunui.—Papa ledges on both banks narrow the channel; a hard papa face right bank at upper part of rapid; a large stream called Otunui on the right bank over papa ledge. The papa ledge on the left bank extends up past the next two rapids; shingle and wire-net wall right bank.
46. Te Pera.—Short moderate run. A quantity of boulders should be blasted and removed from channel.
47. Ohinepane.—Swift run against papa ledge right bank, shingle-bed left bank.

Reach.

48. Te-mihi-a-te-haururu No. 1.—Some papa reefs have been removed; there is a supply of stones on left bank above rapid; an old kainga on right bank above the rapid. A training-wall may be required in the future from the left bank.

Reach.

49. Te-mihi-a-te-haururu No. 2.—Moderate run.

Reach.

50. Taupiri.—Moderate run.
51. Omarutihona.—Shallow run; a stream on right bank; wall may be required; boulders to be removed.

Long good reach.—A stream (Rakura) on right bank over a papa ledge; old kainga (Arimatia) on left bank.

52. Waiari.—Short swift run; channel right bank, shingle-bed left bank.

Short reach.

53. Te Aukopae.—Swift run to papa face left bank, channel left bank; shingle-bed right bank, a shallow above. A Government road comes out here, and a landing-place has been put in. This place is very freely used by settlers for landing and shipping goods.
54. Oturoi.—Long run; moderate current; channel left bank, shingle-bed right bank; may want wall from right bank.

Good reach.—Old kainga (Teoteo) on right bank.

55. Pohue.—Moderate run; stones have been cleared from channel.

Good reach.

56. Taurakawau.—Stone reef point on right bank; training-wall required from left bank.

Long good reach.—The name of this reach is Taurakawau. Boulders have been removed from mid-channel.

57. Toka-ate-atua.—Channel left bank against papa ledge, shingle-bed right bank; swift run; some papa has been removed from the channel.
58. Komako.—Long swift run; channel right bank; good stones for wall which is required on left bank. Nukunuku and old kainga on right bank.
59. Ohiepueru.

Good reach.—An old kainga (Whenuatere) on left bank.

No.

60. Tiwhapaua.—Swift run; channel in middle; papa ledge right bank.

Good reach.—Stones on left bank.

61. Paparoa.—Swift run between rocky islet and a papa ledge on right bank. A very considerable quantity of the papa ledge on right bank has been removed to widen the channel, and boulders taken out of the channel. There is a large waterfall on the right bank. This channel was previously almost impassable in low river, but is now an easy and excellent passage.

62. Waiwhakaata.—Narrow run between boulders on left bank and papa ledge on right bank.

63. Takapauopuhi.—Stones on right and left banks.

Good reach, called Waikirikiri.

64. Whatanuku.—Stones on right bank, channel on left bank; moderate run.

Good reach.

65. Koiro (123 miles from Wanganui).—Swift run; channel left bank, shingle-bed right bank; an old kainga (Koiro) on right bank, shingle and wire-net wall left bank.

66. Owhata.—Swift run; channel right bank, old kainga right bank; a small stream (Oringaputangaa) on left bank, a training-wall left bank.

67. Arataua.—Swift run; rather shallow, and continues to above an old kainga left bank; channel cleared of boulders; wall required from left bank.

Short reach.

68. Poukaria.—Swift run; Ohata, an old kainga, on left bank.

Short reach.

69. Ototekawa.—Swift run; channel from left bank at top to right bank below; wall from left bank.

70. Tokapihepihe.—Swift run; the run extends above.

Reach continues.—Stones available on left bank.

Reach with moderate current.—Old kainga on left bank called Te Ohu, and stream of same name left bank over papa ledge; a large rock on left bank, called Tokapihepihe (a taniwha).

71. Te Ohu.—Moderate run; channel left bank; boulders have been removed.

Reach.

72. Te Ruawhakakainga.—Swift run; old kainga left bank; shallow run may require wall from left bank later. A large stream (Ruawhakainga) on left bank.

Long shallow reach.—May want training-wall in future; an old kainga (Auroa) on left bank.

73. Te Auroa.—A long shallow run; training-wall in future may improve.

Short reach.

74. Whakapaenoa.—Swift run; channel right bank; sharp turn against papa-face.

Good reach.

75. He Repu.—Shallow run; training-wall of shingle and wire net from right bank requires repairs.

Good reach.

76. Otuiti.—Moderate run.

Good reach.—Otuiti Stream and waterfall over papa ledges right bank.

77. Owhawhe.—Channel right bank, shingle-bank left bank; swift run.

Good reach.

78. Kairakau No. 1.—Swift run.

Short reach.

79. Kairakau No. 2.—Swift run; shingle-bed right bank keeps water over to channel.

Good reach.—At top large shingle-bed right bank, and stones available for walls on left bank.

80. Kirikau.—Shingle-bed below rapid; channel left bank; swift run; some stones are available on left bank, upper part.

Good reach.—Waterfall over two papa ledges left bank, called Kokakoriki. Some stones available for walls at bank above the fall.

81. Kokakoriki.—Swift run; channel left bank at papa face; a moderate run extends above.

Good reach continues.

82. Whakapiri.—A moderate run in this reach.

Good reach.—Te Puha; old kainga left bank.

83. Te Puha.—Swift run; channel left bank, shingle right bank.

Good reach.—Some stones for walls available right bank, and old kainga (Pehimaka) left bank.

84. Ruangarahu.—Broad shallow run; shingle and wire-net wall left bank.

Short reach.

No.

85. Awamate No. 1.—Channel at centre at top, and turns sharply to papa face at right bank at foot; swift run; some stones available for walls on left bank just above rapid.

86. Awamate No. 2.—Channel left bank at stones and goes to right bank at top, with shingle-bed and stream left bank.

Good reach.

87. Kakahi.—Swift run; channel right bank, shingle left bank.

Good reach.—Old kainga (Kakahi) right bank.

88. Tutaehua.—Channel right bank, shingle left bank; swift run.

89. Te Kapara.—Moderate run; small stream left bank over papa; some way up supply of stones on right bank.

Good reach.

90. Ohinemanuhiri.—Moderate run just above the Ohura.

Ohura River, right bank.—Houseboat moored here (114 miles from Wanganui).
Good reach.—Old kainga (Maraekowhai) right bank.

91. Kahuitara.—Broad run, rather swift; best water right bank, shingle and wire-net wall left bank; short wall required at foot of rapid from right bank.

Good reach continues.

92. Oetea.—Slight run in this reach.

Good long reach.—Some stones along banks are available. The name of this reach is Ngatukuwaru.

93. Ohuraite.—Stiff run; stream right bank with stones at mouth; channel right bank; the shallow goes over the rapid; stones have been removed. Stone wall right bank, shingle and net wall left bank.

94. Taurimu.—Channel left bank, shingle right bank; short swift run.

95. Waikutapara.—Small rapid.

Good reach.—Tawhata kainga left bank.

96. Te Hue.—Channel left bank; stones have been blasted and removed.

Good reach.—Some stones available for walls on the banks.

97. Mangaohutu.—Stream of the same name on left bank. A landing here badly wanted.

Short reach.

98. Mahoronui.—Swift run; channel left bank, shingle-bed right bank.

Short reach.

99. Papanui.—A stream of the same name on the right bank, with stones.

Short reach.

100. Waikukutea.—Long shallow run; shingle and wire-net walls from both banks.

101. Otahapa.—Channel left bank, shingle right bank; shingle and wire-net wall from right bank.

Short reach.

102. Mangaaukaukau.—A stone ledge on left bank just below.

Good reach continues, and is called Waipahihi. On the banks stones are available. A salt spring out of the papa face on right bank in this reach; a stream on the left bank, with papa ledge below.

103. Waimanu.—A slight run in this reach.

Good reach.

104. Makomako.—A shallow run; shingle and wire-net walls from both banks require repairs.

Retaruke River, left bank (108 miles from Wanganui).

105. Whakatara.—Long shallow run; shingle and wire-net wall from left bank.

Short reach.

106. Kaiwhakauka.—An old kainga of the same name on right bank, and stream on left bank; a stiff run; channel left bank; old eel-pas in stream.

Good reach.

107. Taurakawa.—A stream on left bank with stones; a wall may be necessary.

Good reach.

108. Otahua.—Shallow run; stone wall right bank, shingle and wire-net wall left bank.

109. Mangapapa.—Easy run in this reach; the river narrows just above the papa ledge; a stream and stones on left bank.

Good long reach.—A small waterfall on right bank, with papa ledge below. This reach is called Mangapapa.

110. Waikoriri.—Two large shell rocks in the river just below should be removed, but good channel past them. This is an easy rapid.

111. Kowhaiturua.—Stream right bank; a wide run; a long run above is shallow, and training-walls may be required in future.

No.
112. Otawa.—Channel left bank, shingle-bed right bank.

Reach.

113. Te Haukopai.—Channel left bank, shingle-bed right bank; sharp turn below to papa face on right bank.

Good reach.

114. Ngararanui.—Short quick run; channel left bank, shingle-bed right bank.

Good reach.

115. Otupea.—Short quick run.

Short deep pool.

116. Owairua (at a bend).—Channel right bank; a long swift run; old kainga left bank; a snag requires removal.

117. Mangapapa.—Short run; channel left bank; papa ledge at top on left bank.

Short reach.

118. Ohei.—Channel right bank, shingle left bank. These two rapids are close to each other.
119. Wairingia.—Long run; stones have been cleared from channel; only a narrow neck of land between this and No. 126 below. Channel has been cleared of boulders.

Good reach.—A large papa bluff on right bank resembles an ironclad ship. This is called Koinaki. A long reach.

120. Kokiri.—Small run; shingle on left bank, channel at papa face right bank.
121. Kirikiriroa.—Short run (100 miles from Wanganui).

Good reach.—An old kainga (Kirikiriroa) on left bank, large shingle-bed on left bank. This is at a point of a long bend in the river.

122. Horowhenua.—Shallow wide run. A training-wall urgently required; the material is on the ground, and the wall will be constructed next working season.
123. Ohuaiti.—Swift run, extends above.

Good reach.

124. Tapuitopo.—A wide run.
125. Otuhoe.—Stiff run; channel left bank.
126. Te Maai.—Wide run; there is a narrow neck of land here between the river some distance above at a neck of a large bend of the river (see No. 119 previously referred to).

Long reach.—In part of it two shell-rock ledges jut out from either side, narrowing the channel. This is called Waitaiti.

127. Mamakutapu.—Short swift run at papa face left bank, shingle-bed right bank.
128. Tarepokiore.—There has been a large landslip formerly on the left bank; a narrow clear run against a papa face on the right bank. A large quantity of the cliff on the right bank has been removed, and also the point on the left bank below. In flood-time this was previously a dangerous place, as a whirlpool existed. This has been minimized by the works effected, and the channel is now a fairly good one in conditions of water other than in high flood. A further quantity of stone might be removed with advantage. It is interesting to note that within the memory of an old Native it is reported that when the slip came down from the left bank at this place years ago it completely blocked the river.
129. Tahereaka.—An old kainga on left bank. It is noteworthy that at one time an immense nest of snags existed here and at the foot of Tarepokiore. These two places were a menace to navigation, even for canoes, in the earlier history of the work.
130. Opakua.—Channel right bank; swift run; stream right bank; old kaingas both banks, with poplar-trees.

Short reach.

131. Matapihi.—A stream on left bank; boulders have been removed here.

Good reach.

132. Raratu.—A stream right bank; a wall may be necessary later.

Good reach.

133. Paparangiora.—Easy run.

Good reach.

134. Tautarakapua.—Swift run; channel in middle, shingle-beds both sides.
135. Ohineika.—Broad shallow run; small stream over papa on right bank; stone walls from both banks.

Good reach.

136. Kakanohue.—Swift run; channel right bank against papa face.
137. Otawhare.—Long run; rather shallow.

Good reach, called Tamatea's Reach.

138. Arawhata.—Short run.

No.
139. Ohauora.—Swift run; channel left bank, shingle-bed right bank; an old kainga (Ohauora) and a stream on left bank.

Good reach.—The straight of the river, called Otaihanga, ends.

140. Whaokete No. 1.—Short swift run; channel right bank, shingle-bed left bank.
141. Whaokete No. 2.—Wide run; rather shallow; small waterfall right bank.

Good reach.

142. Auroa.—Swift run; channel right bank, shingle-bed left bank.

Good reach.

143. Whatakiwi.—Easy run.
144. Otumape.—Channel left bank, shingle-bed right bank; swift run.
145. Whakawatea.—Channel left bank, shingle-bed right bank.

Good reach continues.

146. Parikarangaranga.—Easy run.
147. Pokorua.—Easy run.
148. Oputara.—Easy run.

Good reach.—Part of Otaihanga; narrow between papa faces.

149. Opuraha.—Shingle-bed in middle; stiff run; there is a stone wall on right bank.

Long good reach.—The straight of the river, called Otaihanga, begins.

150. Te Miro.—Easy run; rather shallow; may require training-wall.
151. Nikotapu.—Easy run; stream on left bank above it.

Good reach.

152. Kaiwaka.—Channel right bank, shingle-bed left bank; long run; stream on left bank.
153. Hemotuke.—Moderate run.
154. Tokakutuku.

Good reach.

155. Reperepe.—Swift run; channel right bank, shingle-bed left bank; snags at head of rapid require removal.
156. Kaiaroa.—Swift run; shingle-bed on right bank; an old kainga (Puketapu) on right bank.
157. Kauwaewhare.—Stone training-wall from left bank.
158. Kawhakarewa.—Sharp run along shingle-spit and strikes to papa face on right bank; shingle-bed left bank.

Tangarakau River joins on right bank (85 miles from Wanganui).

159. Tahuna-roa.
160. Otapapa.
161. Omarukiha.
162. Mangatoatoa.
163. Te Kowhai.
164. Te Moari.

Whangamomona River joins from right bank.

165. Teauropae.
166. Tehikuotemotu.
167. Matawhero.
168. Whatakaka No. 1.
169. Whatakaka No. 2.
170. Okareroa.
171. Otaraiti.
172. Oapehu.
173. Otai Pohata.
174. Houtaua.
175. Papakino.
176. Mangapurua.—Mangapurua Stream left bank.
177. Opopo.
178. Oparea.
179. Tangahoe.—Wall from left bank required.
180. Otaiko.—Stone walls from right and left banks.
181. Aratini.—Parinui and Utapu Pas on right bank (69 miles from Wanganui).
182. Pouwhawha.
183. Ramanui.—Stone wall right bank, Tieke Pa left bank.
184. Omaika.—Stone wall from right bank.
185. Puahue.—Stone wall from right bank.
186. Arawhata.—Landing here serving River Trust 10,000-acre endowment block on left bank.

Manganui-a-te-ao River joins left bank (62 miles from Wanganui).

187. Matariwa.—Stone wall from right bank.
188. Parakiwai.—Stone wall required from right bank.

No.

189. Ngaporo (upper).—Stone wall right bank, shingle and wire-net wall left bank, as also between here and next rapid (190). This has always been a difficult place to navigate in any conditions of river. The works effected at different times have resulted in a fair channel.

190. Ngaporo (lower).

191. Mangaio.

The Caves.—Right bank.

192. Ruahinetoro.—Stone wall right bank.

193. Aratira.

194. Autapu.—Stone wall from right bank.

195. Te Aute Mutu.—Stone wall from right bank.

196. Paparoa (upper) } A very large quantity of papa reef has been blasted and removed from these
197. Paparoa (lower) } two rapids on the left bank. These are specially swift runs; the channel, however, is a good one. Some papa lumps to remove.

Pipiriki (55 miles from Wanganui).—There are two substantially built wharves here. Pipiriki House—a tourist resort—is here. This is the stopping-place for boats up and down stream. The coach-road connecting with the Main Trunk Railway line goes through Raetihi and connects at Ohakune. A Native settlement on both sides of river.

198. Matangawa.—Papa reef left bank; swift run.

199. Mangatinoka.

200. Te Puha No. 1.

201. Te Puha No. 2.

203. Tahuerapa.

Iruharama (Jerusalem) (49 miles from Wanganui).—Kainga on left bank, Catholic church and mission-house and school. A fairly large settlement.

204. Kukupai.

205. Kauaeroa.—Long swift run; sharp turns to left and right banks. Kauaeroa, an old kainga, on right bank.

206. Haumoana.—Channel left bank; swift run; long stone wall from right bank.

Tawhitinui.—Kainga right bank.

207. Moutoa.—Long swift run; channel right bank, two stone walls from left bank. Moutoa Island left side of walls.

Ranana (London).—Kainga on left bank. Catholic church and school; a fairly large settlement; a landing in course of construction.

208. Kaitete.

209. Orongatea.

210. Kaiwaka.—Swift run; channel left bank.

211. Parangarahu.—Shingle and wire-net wall right bank, stone wall left bank.

212. Matahiwi.—Stone walls from both right and left banks. Government road into the Ohotu Block comes out on left bank. A landing is necessary here. There is considerable settlement depending on the river as a highway for passengers and cargo. A good stock-road from here to Wanganui on left bank.

213. Ruapirau.—Stone wall from left bank, channel right bank; swift run.

214. Te Ngaue.

Koroniti (Corinth).—Kainga left bank. Schoolhouse and Technical School for Native children here (now unused).

215. Otawa.

216. Te Ariro.

217. Opohe.

218. Te Punga.

219. Otumaire.

220. Ahuahu.—Stream of same name right bank; good landing and wharf; Government road comes out serving the Te Tuhi Block; considerable settlement in country behind.

221. Ngapurua.

222. Umutapi.—Stone wall from left bank.

Atene (Athens).—Kainga left bank (29 miles from Wanganui).

223. Pokaetorongu.

224. Te Pahi.

225. Kairakau.—Swift run.

226. Kahikatoa.

227. Tauterata.

228. Upukupoito.—Island in mid-stream; stone wall at head of island from left bank closes channel previously left bank; stone wall from right and left banks at foot of island. (Note.—A large deposit of shingle on this island in floods; care will have to be exercised in dealing with this place. It would be of benefit to lengthen the walls at foot.)

229. Auokura.—Stone wall from left bank.

Te Rimu.—Left bank.

No.
230. Te Rewa.
231. Whakaruawaka.—Swift run.
232. Ohaoa.—Two stone walls from right bank, one stone wall from left bank.

Parikino.—Kainga left bank (22 miles from Wanganui).

233. Huiarere.—Stone walls from right and left banks.
234. Pungarehu.
235. Tupapa.—Stone walls from right and left banks.
236. Punakawhitu.—Stone wall from left bank.
237. Te Kohai.
238. Kanihinihi.—Stone wall right bank.
239. Auohina.

Raorakia (Laodicea).—Kainga left bank (14 miles from Wanganui); Kaurapoa Stream left bank. Wanganui River Trust's jurisdiction ends.
The Quarries.
Upokongaro.
Railway-bridge.
Aramoho.
Wanganui.

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NEW ZEALAND.

WANGANUI RIVER STEAMER MAIL CONTRACT

(REPORT OF DEPARTMENTAL COMMITTEE ON).

Laid on the Table of the House of Representatives by Leave.

WANGANUI RIVER SERVICE.

Sir,— Wellington, 12th June, 1913.

We proceeded to Wanganui on the 15th ultimo for the purpose of inquiring into the condition of the Wanganui River service. On reaching Wanganui we made some preliminary inquiries there, and arranged for a boat to convey us down the river from Taumarunui to meet settlers. In order to give no ground for future complaint we issued and distributed to settlers a printed notice of our movements and inviting them to meet us. We also inserted a notice in the *Wanganui Chronicle*, and telegraphed in similar terms to the Postmaster at Taumarunui and to Telephonists in the Wanganui River district requesting them to advise all persons concerned. Having allowed sufficient time to elapse for the information to be disseminated as widely as possible, we proceeded by train to Taumarunui on Monday, the 19th ultimo, and took evidence there the following day. Though Taumarunui was understood to be much dissatisfied with the service, but few presented themselves to give evidence. Some of the gentlemen who had previously made complaints to the Prime Minister failed to attend. But little could be elicited at Taumarunui, and we started down the river on Wednesday, meeting little knots of settlers *en route*, and arriving in Wanganui on Saturday. We were advised that the condition of the roads and tracks prevented many from meeting us, but the general tenor of the information supplied to us all through left no doubt on our minds as to the true position. Two days were devoted to inquiries in Wanganui, but the representatives of the principal business firms there were extremely shy in coming forward. We, however, waited on a number of business people, who explained their views privately, explaining that their business relations prevented them from giving official evidence. The reasons are, of course, obvious. As an instance of this the manager of one large commercial house informed us he could not tender evidence owing to the business relations between his firm and Hatrick and Co. Others concerned were no doubt influenced by similar considerations. With regard to the object of our mission we have the honour to report as follows:—

The River and its Improvements.

We came down the river at a time when the water was high and the difficulties of navigation were not apparent. There can be no doubt, however, that during several months of the year navigation is difficult and costly, owing to the lowness of the river, and it is during this period that the bulk of the passengers and goods have to be carried.

The Chairman of the Wanganui River Trust supplied statements showing the expenditure of public money in improving the river, the mileages between landing-places, and other particulars. The Chairman also brought under notice the need for a launch for the use of the Trust in keeping the river open. At present a punt has to be used, and it is expensive and difficult to move about, especially up-stream. There can be no question that a suitable launch would be of material assistance to the Trust in carrying on its increasingly important operations.

Another matter mentioned was a project for diverting the water from Lake Roto Aira to one of the tributaries near the source of the Wanganui River. This, it was stated, should not prove any very great undertaking, and would enable the supply of water in the river to be regulated during the dry season. Having regard to the prospective increase of settlement, a subject which will be dealt with further on, and to the fact that many of the settlers will have to depend entirely on the river for an outlet for many years to come, we respectfully suggest that the proposal for diverting the waters of Lake Roto Aira should be inquired into by an Engineer and a report obtained. Another matter in connection with the river which we think should be brought under notice is the turntable in the Avenue Bridge at Wanganui. The turntable, we understand, has not been opened for thirteen years, and we were told that legislative authority had been sought to close it permanently. Should such a proposal be brought forward again we think it should not be agreed to without very careful consideration. It might be necessary in future to have the use of the turntable in order to get vessels to the Railway Wharf for the purpose of loading and unloading freight, and for the carriage of sheep to the freezing-works at Castlecliff.

SETTLEMENT, PRESENT AND PROSPECTIVE.

The importance of the river service as a factor in the development of the country may be estimated when it is considered that it is the highway that provides access to about 540,000 acres of land. It is true that as soon as the roads near the upper reaches of the river are completed it is likely that the settlers on some 50,000 acres may prefer to use the Main Trunk Railway instead of the river; also that the same reason may lead those near Wanganui to cart to that town; and it is also not forgotten that a considerable area of reserves help to make up the total quoted; still, notwithstanding this, we are satisfied that the river will always remain the best and cheapest method of transport for the produce of the greater part of the 540,000 acres.

The work of the River Trust in improving the channel, and Hatrick and Co.'s enterprise in providing a regular service, has stimulated the settlement of the waste lands adjoining the river. This settlement is at present only in its infancy, and it takes a considerable time to bring bush land into profit, especially when the settlers have not got much capital, as is the case here. Yet last season there was a substantial increase in the number of bales of wool exported down the river, and we were told by many settlers that their output would be doubled next year, and go on increasing for many years. At present about 106 Crown tenants, thirty-six Maori Land Board tenants, and many Natives use the river. Notwithstanding that many of the tenants are quite new and have not produced much, about two thousand bales of wool were exported last season. A large number of bushfellers and fencers were employed, and much material was imported for fencing, &c. We were told that the Maori Land Board, on behalf of the Natives, was bringing into cultivation a large area near Ranana; also that large areas were being felled and grassed for various Maori Land Board tenants; and we know that the Crown has within the last few months subdivided and let 6,000 acres in the Waipapapa Valley, is advertising for immediate sale 31,500 acres on the west bank of the Wanganui River near Pipiriki, and has three survey parties subdividing another block of 30,000 acres for sale next year between Pipiriki and Retaruke. The River Trust also proposes to let 6,000 acres next season. It therefore seems reasonable to suppose that the settlers' estimate that their output will be doubled next year, and go on increasing for many years as the bush is felled and the land grassed, will be realized.

TOLLS LEVIED BY RIVER TRUST ON GOODS CARRIED ON RIVER.

The Wanganui River Trust levies tolls on goods carried on the river. The dues are collected for the Trust by Messrs. Hatrick and Co., who in turn collect from the consignees. The goods carried are entered on the manifests, copies of which are supplied to the Trust, and the amounts paid by Messrs. Hatrick and Co. are checked by a Government Auditor. While goods carried on the steamers, especially between intermediate points, might at times be omitted, it would cost the Trust far more than any possible loss to establish an effective check. A schedule of the tolls received by the Trust during the last twenty years is appended [not printed]. The total for the twenty years was £3,075 19s. 8d. The amounts received dropped from £186 in 1903–4 to £99 in 1904–5, and from £302 in 1907–8 to £130 in 1908–9. This, it was explained, was in the first case due to the Main Trunk Railway being available and thus diverting a large part of the traffic from the river, and in the second case to a reduction of the River Trust's dues from 2s. 6d. to 1s. 6d. a ton. The Chairman informed us that owing to the improved outlook for the Trust's finances through increased rents it was hoped in the near future to abolish the tolls altogether. The recovery of the dues cannot be regarded as satisfactory. We respectfully suggest that Government might consider the propriety of increasing any subsidy paid to the Trust on condition that the dues were abolished. This would afford practical assistance to the poorer settlers at no great cost. The total amount received by the Trust from this source last year was only £198 10s.

MESSRS. HATRICK AND CO.'S PLANT.

In response to a letter we addressed to Messrs. Hatrick and Co., it was stated amongst other things that over £60,000 was sunk in steamers, wharves, workshops, wire ropes in the river for hauling, cargo-sheds, men's shore quarters, Pipiriki House, and the Houseboat. It was further stated that the annual cost of running the service, including 5 per cent. on the capital invested, was £15,000, and that the steamers covered over 54,000 miles annually. We were not in a position to verify any of the figures supplied by Messrs. Hatrick and Co. A list of the steamers employed in connection with the river service and their tonnage is given [not printed]. In addition to these steamers there is a slipway and repairing workshop at Wanganui, hauling-wires on the rapids, several sheds for goods along the river erected either wholly or in part by Messrs. Hatrick and Co., wharves, Pipiriki House, the Houseboat, and other property. As the scope of our inquiry did not include any question of the acquisition of the service, we did not think it necessary to go into details in connection with plant. A word should be said regarding the wire ropes laid down in the river for hauling up the rapids. These ropes wear out in about two years, and have to be replaced. The ropes have been laid down in the river by Messrs. Hatrick and Co. If an opposition service were running the ropes would have to be taken over by the River Trust, and compensation, presumably, paid to Messrs. Hatrick and Co. Two sets of ropes could not be laid down on the rapids, as they would foul and become unworkable.

THE CONTRACT.

The present contract is for the carriage of mails thrice weekly between Wanganui and Pipiriki throughout the year, and thrice weekly between Pipiriki and Taumarunui from the 15th November to the 15th May, and twice weekly from the 16th May to the 14th November, and as often as any extra steamers may run during these periods. Attached to the bond are schedules of passenger fares and goods freights. The former is full, comprehensive, and, having regard to all the circumstances, equitable. The schedule for goods traffic is a mere shadow of a tariff, particularly with regard to the down-river trade. We quote hereunder the schedule in full:—

The maximum charges for fares and freights shall be the following, viz.:—

FARES.

	Settlers.				Tourists.			
	Single.		Return.		Single.		Return.	
Wanganui to—	s.	d.	s.	d.	s.	d.	s.	d.
Upokongaro or *vice versa*, Quarries, Kauwhaike ..	2	0	4	0	2	0	4	0
Raorikia or *vice versa*	2	6	5	0	2	6	5	0
Ramahiku, Tupapa, or *vice versa*	2	6	5	0	5	0	8	0
Pungarehu, Parekino, Pukerimu, or *vice versa* ..	3	0	6	0	6	0	8	6
Te Rimu, Pitangi, or *vice versa*	3	6	7	0	7	0	9	6
Opokopoiti or *vice versa*	4	0	7	6	7	6	10	0
Ohui or *vice versa*	4	6	8	6	8	6	11	0
Atene or *vice versa*	4	6	9	0	9	0	12	0
Ahu Ahu, Te Tuhi, or *vice versa*	5	0	9	6	9	6	13	0
Koroniti or *vice versa*	5	0	10	0	10	0	13	6
Galatea, Kawanui, Matahiwi, or *vice versa* ..	5	6	11	0	11	0	15	0
Ranana or *vice versa*	6	0	12	0	12	0	16	0
Jerusalem, Kaiwaroa, or *vice versa*	6	6	12	6	12	6	17	6
Pipiriki or *vice versa*	7	6	15	0	15	0	20	0
Rangitautahi, Tapapa, Ngaporo, or *vice versa* ..	10	0	20	0	17	6	25	0
Manganui-o-te-au, Arawhata, or *vice versa* ..	10	6	20	0	18	0	25	0
Rananui, Tuke, Paranui, or *vice versa*	11	6	22	0	19	0	27	0
Whangamomona, Tangarakau, or *vice versa* ..	17	6	35	0	25	0	40	0
Puketapu, Nikotapu, or *vice versa*	20	0	40	0	27	6	45	0
Aukete, Kirikiriroa, or *vice versa*	22	6	45	0	30	0	50	0
Retaruke, Te Rata Road, Mangaohutu, or *vice versa*	25	0	50	0	32	6	50	0
Tawhata, Houseboat, or *vice versa*	27	6	50	0	35	0	50	0
Opatu or *vice versa*	27	6	50	0	35	0	50	0
Otu-iti or *vice versa*	32	6	52	0	40	0	54	0
Kokakoriki or *vice versa*	32	6	52	0	40	0	54	0
Kokakonui or *vice versa*	34	6	53	0	42	0	55	0
Paparoa or *vice versa*	36	6	55	0	44	0	60	0
Aukopae, Te Maire, Otunui, or *vice versa* ..	38	6	58	0	46	0	63	0
Hikimutu or *vice versa*	39	6	60	0	47	0	65	0
Towhenua or *vice versa*	40	0	60	0	47	6	65	0
Taumarunui or *vice versa*	42	6	65	0	50	0	70	0

The maximum fare between Taumarunui and Pipiriki shall not exceed 40s. for a single ticket and 50s. for a return ticket.

The contractor shall accept passenger tickets or coupons issued by the Tourist Division of the Department of Agriculture, Commerce, and Tourists, and that Department shall be allowed by the contractor the same commission on all tickets or coupons so issued as may be allowed to any tourist agency carrying on business in New Zealand on tickets or coupons issued by it.

FREIGHTS.

Wanganui to— *Up-river.*	s.	d.	
All points to Te Tuhi	20	0	per ton.
All points above Te Tuhi to Pipiriki	30	0	,,
All points above Pipiriki to Tangarakau	40	0	,,
All points above Tangarakau to Houseboat	50	0	,,
All points above Houseboat to Taumarunui	60	0	,,
Taumarunui to— *Down-river.*			
All points to Aukopae	30	0	per ton.
All points below Aukopae to Houseboat	50	0	,,

Weight or measurement at ship's option.

On examining the bond executed by the contracting parties there appears to be included in it an unnecessary and ambiguous clause which might be used to cover the levy of improper fares on passengers. The clause in question is to the effect that the maximum fare between Taumarunui and Pipiriki shall not exceed 40s. for a single ticket and 50s. for a return ticket. It is not clear whether this refers to settlers or tourists. The settlers' fare, single, from Wanganui to Taumarunui is 42s. 6d.; the fare from Wanganui to Pipiriki is 7s. 6d. The fare from Taumarunui to Pipiriki should therefore be 35s., but under the clause quoted 40s. might be charged.

A glance at the freight schedule shows that it practically shuts out competition from the Taumarunui end. The distance from Taumarunui to Aukopae is sixteen miles, yet the freight is fixed at 30s. a ton, while below Aukopae to the Houseboat, distant thirty miles from Taumarunui, the freight is 50s. a ton. Below the Houseboat there is no quotation. It is easier, of course, to carry goods down-stream than up-stream, and the products of the settlers will always by preference go down-stream to Wanganui, as at the latter point they are at a port of shipment and there are no railage charges. With regard to the importation of goods into the district it is very different. Only small boats carrying a maximum of 6 to 8 tons ply between Taumarunui and Kokakonui, a distance of twenty-two miles. Obviously it would be easier to bring goods down than up stream from Taumarunui as far as Kokakonui, where there is a transhipment to a larger class of steamers. Yet the freight to places between Taumarunui and Kokakonui ranges from 30s. to 50s. a ton. We do not suggest that goods should be carried from Taumarunui to places beyond Kokakonui without a very considerable proportionate increase in the charges, as it must be borne in mind that the boats running between Taumarunui and Kokakonui have first to go up-stream in order to come down, and that their carrying-capacity is so very limited and cannot be increased. If goods were carried down in large quantities on these small boats for transhipment the cost of handling the merchandise would be heavily increased. As far as Kokakonui, however, we think the freights should not have been higher than for the carriage of goods up-stream between the same points. A comparison between the passenger and freight charges illustrates this. A settler is carried from Kokakonui to Taumarunui or *vice versa* for 8s. The schedule does not make it clear, but presumably a ton of goods would be carried from Kokakonui to Taumarunui for 10s.; the reverse way (down-stream) the charge would be 50s. The absence of a proper tariff on goods is, as we shall show further on, responsible for the greater part of the dissatisfaction with the service which has arisen. The carriage of mails must have been undertaken by Messrs. Hatrick and Co. in accordance with the provision of the Post and Telegraph Act, 1908, at rates fixed by Order in Council. The justification for a contract entailing a subsidy of £1,250 a year would have been an equitable scale of charges for the carriage of passengers and the goods of settlers. The former object was, we think, fairly attained; the latter seems to have been neglected. The revenue derived from the service by the Post and Telegraph Department is estimated at only £80 a year. The Lands Department contributes the larger part of the subsidy. We think that before any tender was accepted the terms and conditions should have been submitted for the approval of that Department.*

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* Conditions were submitted to the Head Office of the Lands Department for consideration before the bond was signed.

THE SERVICE.

The service on the river is performed in three sections, and by three different classes of boats. The larger boats ply between Wanganui and Pipiriki, the smaller between Pipiriki and Kokakonui, and the smallest between Kokakonui and Taumarunui. This entails transhipment of all through passengers and goods at Pipiriki and Kokakonui. The two larger classes of boats are coal-burners, and the smaller now use liquid fuel. Making due allowance for the difficulties of navigation, the necessary smallness of the steamers, and their restricted appointments, we are of opinion that Messrs. Hatrick and Co. give the public a fairly good and regular service. There is, however, reason to think that the discipline on board some of the steamers is capable of improvement, but this is a matter which will be dealt with in connection with the complaints of settlers.

COMPETITION.

About twelve years ago a company was formed in Wanganui to run a steamer to Pipiriki in opposition to Messrs. Hatrick and Co. The opposition company was unsuccessful and went into liquidation, its steamer eventually passing into the hands of Mr. Hatrick.

During the past six years a Mr. Ross has been successfully running a launch on the lower reaches of the river, and his evidence will be found at page 78 [not printed]. Mr. Nichols, a former employee of Mr. Hatrick, is now the promoter of a company for the purpose of entering into competition with Messrs. Hatrick and Co., and it is said that a steamer will be running within twelve months. She is, however, intended to run only to Te Tuhi, thirty-three miles up the river from Wanganui. Mr. Nichols's evidence will be found at page 72 [not printed].

TRAFFIC.

There are several unusual features in connection with the traffic on the Wanganui River. The busiest months of the year both for passengers and freights are those in which the river is lowest. The cost of handling the traffic in the upper reaches by boats of such small tonnage, entailing as it does transhipment at Pipiriki and Kokakonui, must be very heavy. The small boats running between Taumarunui and Kokakonui carry five hands. The larger boats between Wanganui and Pipiriki carry seven and eight hands. The only produce of any magnitude which the settlers at present have to export is wool. This is brought down to Wanganui mostly during the months of December, January, and February. There is but little carried out during the other nine months, the bulk of the traffic then being supplies carried in to settlers. This feature of the service will no doubt be gradually modified as settlement advances, and the produce of the settlers becomes more diversified.

EFFECT OF RAILWAY AND ROAD EXTENSION.

As has been previously stated, the extension of the Main Trunk Railway had the effect of seriously diminishing the traffic on the river. The same thing is said to have occurred at Tangarakau. The settlers there until last year used the river. Since the rails have been laid to Whangamomona the trade has almost entirely been diverted from the river. Owing to the difficulty and cost of handling goods on the upper reaches of the river at low water, it is likely, we think, that as practicable roads are provided there will be a tendency for goods to find an outlet and inlet by land at Taumarunui and other convenient points on the railway-lines. Allowing for all this, however, if fairly reasonable charges for the carriage of goods can be secured by settlers, the Wanganui River must remain the natural highway for a large area of country.

COMPLAINTS.

The complaints made by those using the river service are in some cases, we think, well founded, and in others they are the result of misapprehension or a desire to secure more than can be reasonably expected. They cover practically every point of the service, and we deal with them seriatim hereunder:—

(1.) *Excessive Freights at the Taumarunui End.*—This complaint we regard as justified, and it is dealt with in our remarks under the heading of "The Contract."

(2.) *Delays in Removal of Wool from the Upper Reaches of the River.*—It is admitted by Mr. Hatrick that such delays have occurred. His explanation is that the wool could not be removed at the time it was produced, owing to the lowness of the river. The complainants who saw us in most cases admitted that Mr. Hatrick's excuse was a valid one. It can hardly be supposed that Mr. Hatrick would in his own interest leave wool lying at the landings which he was in a position to remove, and for which he was to receive payment at the rate of about 10s. a bale. Mr. Hatrick suggests that the proper remedy for these complainants is to shear early, so that their wool can be brought down in December when there is yet sufficient water in the river. This seems a very simple way out of the difficulty, but some of the settlers may be unable to secure shearers at the right time. Mr. Hatrick informed us it was his intention to erect a collecting-shed at Kokakonui, the wool would be removed from the different landings in small quantities and taken to the collecting-shed, and a large steamer sent up to remove it as the state of the river permitted. This arrangement, if given effect to and executed in good faith, should, in our opinion, do much to remedy the grievance of settlers under this head.

(3.) *Loss of Goods through their not being landed sufficiently high up on the River-banks.*—It is not disputed that losses of this kind have occurred, and some of the complainants have the suspicion that had they been doing business with Messrs. Hatrick and Co. their goods would have been placed in security. It must be remembered, however, that the river rises very rapidly, as much as 7 ft. or 8 ft. in twenty-four hours, and in flood-time even more. The banks of the river are mostly very steep, and if goods had to be carried up any considerable distance the cost of handling would not only be increased but the steamer would be delayed, and the regularity of the service very seriously interfered with. Mr. Hatrick says that settlers should claim their goods promptly and not leave them at the mercy of the river. The settlers, on the other hand, many of whom live seven or eight miles back from the river, state that they never know when their goods are coming. We heard it stated again and again that settlers had lost their time in coming to the river repeatedly for goods which had not arrived. Such delays are, of course, liable to occur in any service. A good deal of the trouble, we think, should be overcome as telephonic communication is extended to the different settlements on the river. Consignees should then obtain information when goods are coming, and take prompt steps to claim their supplies. We think telephone extension in the valley should be pushed on as rapidly as possible.

(4.) *Excessive and Irregular Fares.*—The settlers as a rule do not complain seriously of the passenger charges. There were a few, however, who thought the passenger fares on the upper reaches of the river were excessive. Seeing the difficulty of navigating this part of the river we hardly think the complaint justified. Other complaints were made that between intermediate points on the river the charges varied. Messrs. Hatrick and Co. should be called upon to disclose every fare levied by them between different points.

(5.) *Poor Food and Insufficient.*—Two or three of the settlers complained that the food supplied on the steamers was badly cooked and insufficient in quantity. The charge for meals served on the steamer is 2s. We would hardly expect to find the table on such steamers, with their restricted appliances, a luxurious one. There is probably not much in the complaint. The bulk of the settlers had no fault to find in this respect.

(6.) *Comfort of Passengers not studied.*—Complaints were made that no attempt was made to study the comfort of passengers in cold weather by protecting the decks from the elements or putting in hot-water pipes; also that journeys were often commenced at an early hour on cold and miserable mornings without it being possible to secure a cup of hot coffee or such simple refreshment. There may be room for this complaint, but we are bound to say it is easier to make the complaint than suggest the remedy, taking all the circumstances into consideration.

(7.) *Settlers only allowed to travel Down-river on Two Boats a Week during Tourist Season.*—This complaint was made by settlers between Taumarunui and Kokakonui. The explanation of this is that certain boats are run through as quickly as possible for the benefit of tourists. The company does not wish to inconvenience tourists by crowding them together with Natives and ordinary wayside passengers on the small boats. It is in the interest of the tourist traffic to land travellers at Pipiriki at a fairly early hour in the evening, and to this end any delay is avoided. The revenue derived from tourist traffic plays an important part in maintaining the service, and we think the arrangements made for carrying tourists and settlers respectively are reasonable. There is a tendency on one hand for tourists to complain that they are sacrificed to the settlers, and on the other hand for the settlers to complain that they are sacrificed to the tourists. It would be difficult and very expensive to satisfy both.

(8.) *Goods not forwarded in Order in which they are entered for Shipment.*—We could find no proof of this. Wanganui shippers whom we interviewed stated they had never found any difficulty in getting their goods away. If there are delays in forwarding goods it is probably at the Taumarunui end. Some of the settlers, having no knowledge of business, are much in fault themselves. These complain that Messrs. Hatrick and Co. will not forward goods unless the freight is prepaid. We had to point out that they could not expect anything else. Goods may be sent by rail to a consignee care of Hatrick and Co., Taumarunui, without any arrangement being made for paying for carriage from railway-station to wharf, or for freight on the river, and then the consignee complains that his goods are delayed. In this matter the settlers have a deep-rooted feeling that unless they are buying from Hatrick and Co. they cannot expect fair play, and nothing would convince them of the contrary.

(9.) *Disorderly Conduct on Steamers due to Drunkenness on the part of Bushmen and Others.*—We were informed that the most disgraceful scenes at times occurred on board the steamers owing to drunkenness on the part of bushmen and others. Mr. Hatrick denies this. We were, however, told of this by witnesses whose word could not be doubted. One witness informed us that he had seen and heard drunken men using foul language in the presence of women, and that there did not seem any difficulty in men already the worse for liquor obtaining more on the steamers. From what we can gather the discipline on some of the steamers leaves something to be desired. There would seem to be a slackness which a strict captain would not tolerate. Mr. Hatrick, however, seems to think that his employees on the river service are everything that they should be, and he will not entertain any suggestion that he is deceived.

(10.) *Abuse of Packet Licenses.*—We were told that the packet licenses held by the steamers were grossly abused, and that far more liquor was sold in bottles at calling-places on the river than was consumed legitimately on board. While we were on the upper part of the river witnesses, as a rule, denied all knowledge of the illicit traffic in drink. Lower down, however, the evidence was contradictory. It was stated by more than one reliable witness that whisky was sold from the steamers to Natives and others, while other witnesses alleged they had no knowledge of the traffic in drink. Mr. Hatrick characterized the statements as a "low-down lie" made for the purpose of injuring him. Persons travelling on the steamers may go on board more or less under the influence of drink, and they may also take with them a good deal of liquor obtained in Wanganui. Allowing for all this, and even discounting much of what we heard, we feel satisfied that there is some ground for complaint. It is but fair to Mr. Hatrick to say that a reliable witness, who gave us a strong description of what he had observed, stated that the steward now employed on the steamer to which he referred was much more strict than his predecessor. This would seem to imply that the servants employed on the steamers were responsible, and that the matter was not within the knowledge of Mr. Hatrick. In such a matter as this witnesses are, of course, reluctant to speak freely, as they are often dominated by the feeling that they might be regarded as "informers."

(11.) *Freight Overcharges and Irregularities.*—It is under this head that the great bulk of the complaints arise. From Taumarunui to Wanganui we heard the same complaints over and over again from settlers. The schedule arranged under the contract has never been printed and circulated, as we think it should have been, and it is so incomplete as to leave room for endless complaints and misunderstanding. Even as it stands we cannot free ourselves from the conviction that the schedule of rates has not always been adhered to by Hatrick and Co. It is difficult to obtain evidence of this, owing to the unbusinesslike habits of many of the settlers. One case was, however, fully substantiated. A settler on the river wrote to Messrs. Hatrick and Co. asking for a quotation for wire and its freight to his landing. The reply, after giving a quotation for wire, stated that the freight was £3 1s. 6d. a ton. The freight under the schedule was actually £2 10s. a ton. The settler wrote to the Postal Department, and Mr. Hatrick was asked for an explanation. The explanation tendered was that the settler must have wanted the wire delivered in 2 cwt. coils, and the company could not agree to handle wire so made up under £3. The settler knew that all wire sent up the river was made up in ½ cwt. coils, but he then wrote to Messrs. Hatrick and Co. specifically asking them for a quotation for *freight on wire in ½ cwt. coils*. The reply he got was a quotation for the *cost of the wire delivered at his landing*. There was no mention whatever of the freight. The settler's statement will be found at page 52 [not printed]. The whole of the documents in this case were produced for our inspection. We could come to no other conclusion than that the settler and the Department had been trifled with by Messrs. Hatrick and Co. If this could occur in one case, obviously it may have occurred in others. The settlers, owing to the want of a complete and detailed tariff, labour under some misapprehension. One man expected that he would get a package weighing 1 cwt. from Wanganui for 1s. because the freight to his landing was £1 a ton. Owing to his total lack of business experience he did not realize there must be a minimum charge on small packages of goods. Upon such premises many of the complaints were founded. Several arguments were put forth that the freight was out of proportion to the value of goods sent in small parcels. Wherever we went we heard the same thing: "If Government would see that a complete and comprehensive tariff were arranged and its contents published, so that the settlers could know definitely what they had to pay in the way of freights, much of the dissatisfaction with the river service would disappear." The Wanganui Chamber of Commerce at a special meeting passed a resolution to the same effect. The request seems to us a most reasonable and necessary one. Government is to a certain extent hampered by the schedule under the contract, but subject at least to the terms of that schedule a detailed tariff sheet should be drawn up, and Messrs. Hatrick and Co. should be called on to disclose in an intelligible form their charges on packages less than 1 ton in weight, on live-stock of different kinds, on grass-seed, potatoes, chaff, wire, timber, &c. In order to make the charges more readily understood by settlers we think they should show the number of sacks of standard weight and size to be taken to the ton, and similarly with other classes of goods whenever possible. Take grass-seed, for instance. The settler always knows what weight of seed he is receiving, but he may know nothing about measurement, and so suspect himself of being wronged when the charges are in order. In connection with the complaints of overcharging we should point out that the settlers do not seem to have been generally aware that their best course was to complain to the Postal Department if they thought they were being overcharged. If they complained at all it was to Mr. Hatrick, from whom they state they never could obtain any satisfaction.

At the root of the whole of the troubles in connection with the Wanganui River service is the fact that the shipowners operating on the river are also merchants competing for the supply of goods to the settlers. Obviously Mr. Hatrick is in a position to outbid his rivals in the competition for the business of the settlers, and the high rates charged from Taumarunui do not permit of successful competition from that end. In all Mr. Hatrick's invoices which we have seen the charges are for goods delivered. The purchasers of goods from Messrs. Hatrick and Co. cannot, therefore, know what they are paying for goods and what for freight thereon.

RECOMMENDATIONS.

The result of our investigations as set forth above lead us to the following recommendations for the consideration of the Government:—

(*a.*) That the subsidy paid to the Wanganui River Trust be increased by £200 per annum on condition that the dues now levied on goods be abolished.

(*b.*) That Mr. Hatrick's attention be directed to the high freights from the Taumarunui end, and that he be requested to consider what reductions can be effected.

(*c.*) That Mr. Hatrick be requested to meet an officer or officers experienced in such business with a view to making complete and more equitable schedules of fares and freights.

(*d.*) That schedules of fares and freights as finally arranged be printed and exhibited at post-offices, copies to be supplied on demand to settlers and others concerned; also that a footnote be added thereto pointing out that complaints addressed to the Chief Postmaster, Wanganui, will receive attention.

(*e.*) That an officer of the Post Office be instructed to periodically inspect the book in which Messrs. Hatrick and Co. enter goods for shipment with the view of ensuring their despatch in accordance with their order of entry, this being provided for by a clause in the contract.

(*f.*) That the attention of Messrs. Hatrick and Co. be called to the complaints of disorderly conduct and illegal sale of liquor, and that they be requested to repress excessive drinking on the steamers, to maintain discipline, and see that the regulations under which the packet licenses are granted are strictly adhered to.

(*g.*) That before calling for tenders at the expiration of the present contract a complete schedule of passenger fares and goods freights, both up and down the river, be drawn up under three different scales—a maximum, based on the existing tariff; a middle, say 10 per cent. less; and a minimum, 20 per cent. lower than the maximum—and that different tenders be called for under the three different scales.

It should be stated, in conclusion, that all the witnesses were given an assurance that their statements would be regarded as confidential.

We have, &c.,

A. P. DRYDEN,
Chief Postmaster, Wellington.

CHAS. A. PIPER,
Traffic Superintendent of Railways, North Island.

T. N. BRODRICK,
Commissioner of Crown Lands, Wellington.

The Hon. the Prime Minister, Wellington.

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1913.
NEW ZEALAND.

MINERS' RELIEF FUND:

PARTICULARS AS TO PAYMENTS UNDER REGULATIONS.

Return to an Order of the House of Representatives dated the 25th July, 1913.

Ordered, "That there be laid before this House a return showing—(1) The total amount received by the Public Trustee for distribution under the Miners' Relief Fund Regulations from the passing of the Act to the 30th June, 1913; (2) the number of payments and total amount paid during the above period on account of pneumoconiosis, or miners' complaint; and (3) the number of payments and total amount paid during the same period on account of accidents."—(MR. POLAND.)

RETURN.

	£	s.	d.	£	s.	d.
1. Amount received under the Gold-miners' Relief Fund Regulations from the passing of the Act to 30th June, 1913:—						
Gold duty	12,436	19	7			
Interest added to 31st March, 1913	198	13	11			
				£12,635	13	6
2. Amount of payments made on account of pneumoconiosis, or miners' phthisis:—						
Miners' allowances (102 claims)	5,100	10	0			
Widows' allowances (83 claims)	4,400	14	0			
				9,501	4	0
3. Amount of payments made on account of accidents:—						
Permanent disablement—						
Miners' allowances (6 claims)	260	0	0			
Widows' allowances (1 claim)	25	0	0			
Temporary disablement—						
Miners' allowances (762 claims)	2,538	8	8			
				2,823	8	8
				£12,324	12	8

FRED. FITCHETT,
Public Trustee.

Public Trust Office, Wellington, 30th July, 1913.

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JAN 1914

NEW ZEALAND.

PUBLIC WORKS STATEMENT,

1913.

BY THE

HONOURABLE W. FRASER,
MINISTER OF PUBLIC WORKS.

WELLINGTON.
BY AUTHORITY: JOHN MACKAY, GOVERNMENT PRINTER.
1913.

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the Under-Secretary of Public
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1913.
NEW ZEALAND.

PUBLIC WORKS STATEMENT.

BY THE HON. WILLIAM FRASER, MINISTER OF PUBLIC WORKS.
NOVEMBER, 1913.

MR. SPEAKER,—

Owing to the financial position obtaining at the close of last session, and in view of the heavy commitments already entered into, I did not feel justified in making available for immediate expenditure the whole of the new items appearing on the public-works estimates. All authorities issued and offers made in pursuance of previous years' appropriations were, however, duly honoured. New votes urgently requiring attention were also authorized on application. As soon as the success of the flotation of the new loan was assured all restrictions regarding expenditure of new votes were removed. Notwithstanding these precautionary measures the total expenditure of the past year on public works was not only in excess of that of the previous year, but was actually the largest in any single year for over thirty years, and amounted to the very large sum of £2,711,068—viz., £2,593,365 out of the Public Works Fund and allied special accounts, and £117,703 out of the Consolidated Fund.

The following table shows the brief particulars of the expenditure of the year, and also the total under each class of work from the inauguration of the public-works policy up to the 31st March last:—

TOTAL EXPENDITURE.

Class of Work.	Expenditure.	
	Expenditure for Year ended 31st March, 1913.	Total Expenditure to 31st March, 1913.
	£	£
Railways—		
New construction	684,196	21,945,802
Additions to open lines	464,636	8,853,417
Roads	374,346	9,723,865
Public buildings	445,192	5,487,225
Immigration	14,694	2,254,606
Purchase of Native lands	...	2,065,720
Lighthouses, harbour-works, and harbour-defences	16,785	1,098,207
Tourist and health resorts...	12,906	229,539
Telegraph-extension	251,375	2,277,125
Development of goldfields	10,644	877,802
Defence-works (general)	23,790	944,209
Departmental	57,425	784,095
Development of water-power	...	18,451
Irrigation and water-supply	...	4,356
Payment to Midland Railway bondholders	...	150,000
Lands-improvement	22,550	104,713
Minor works and services	...	312,607
Cost and discount, raising loans, &c.	72,950	1,243,692
	2,451,489	58,375,431
Wellington–Hutt Railway Improvement	991	228,381
New Hutt Road	1,738	98,822
Railways Improvement Account	29,254	596,768
Opening up Crown Lands for Settlement Account	47,951	632,153
National Endowment Account	2,689	19,838
Waihou and Ohinemuri Rivers Account	9,555	13,324
Aid to Water-power Works Account	35,009	35,009
Irrigation and Water-supply Account	14,689	14,689
Totals	2,593,365	60,014,415

WHANGAREI – NORTH AUCKLAND MAIN TRUNK.

The North Auckland Trunk Railway has now reached a point which renders it necessary to decide by what route a connection can best be made between the main line and the isolated system which has its southern terminus at Grahamtown Wharf, close to Whangarei. Careful surveys of different suggested routes have been made, and after comparison of the results it has been decided to locate the line on a route starting near Whangarei, passing through Mangapai, after skirting the harbour, going close to Maungakaramea, and continuing by way of the Tauraroa Valley to a suitable junction-point with the North Auckland Trunk line. The route adopted is not quite the shortest available, but the cost of constructing the line on this location will not exceed that of the more direct lines which were examined, and the chosen route has the advantages of serving Mangapai, and permitting of a branch line being taken to Waipu later on at moderate cost. A vote of £15,000 to permit of the construction of this railway being commenced is proposed.

HUNTLY–AWAROA.

Construction-work over the first three miles has proceeded at a moderate rate during the year, and trial surveys of two alternative routes to carry the line about two miles and a half further have been completed. The combined road and railway bridge over the Waikato River has also just been completed.

The expenditure during last financial year amounted to £11,732, and for the current year a vote of £25,000 is proposed.

WAIUKU BRANCH RAILWAY.

Last year a branch railway to connect Waiuku with the Main Trunk line was authorized. Trial surveys to locate the most favourable route have been put in hand during the year and are still in progress.

The small expenditure during the past year was charged to the vote for surveys of new lines, but for the current year a special vote of £10,000 is proposed to permit of construction-work being begun.

EAST COAST MAIN TRUNK.

The permanent survey of the section between Waihi and Athenree, on which construction-works were suspended in November, 1912, has since been completed, and a vote is provided on the current year's estimates to permit of the resumption of construction-work thereon.

Formation has been completed and rails laid between Maunganui and Te Puke, a distance of thirteen miles. To facilitate ballasting operations over the next section it has been decided to retain the line in the hands of the Public Works Department for the present, but a train service carrying goods and passengers has been inaugurated for the benefit of the settlers until such time as the working can conveniently be handed over to the Railway authorities. Fair progress has been made over the next five miles and three-quarters between Te Puke and Paengaroa. Formation is approaching completion, one permanent bridge has been erected, and a start made with the platelaying.

Last year surveys were carried out to determine whether a route from Pongakawa via Lake Rotoma to Te Teko would be more favourable for the continuation of this line, but a comparison of this route with that nearer the sea-coast shows that the advantage is altogether with the coast route, which has therefore been adopted. In pursuance of this determination authority is asked in the Railways Authorization Bill for putting in hand another section of this railway between Pongakawa and Taneatua, a length of about thirty-five miles.

Hitherto the only source of supply for ballast material for the Bay of Plenty section of the East Coast line has been the quarry at Moturiki Island, close to Tauranga Harbour. As the rails have now been laid for fifteen miles from this point, it is no longer economical to carry ballast from there, and a new quarry of suitable rock has been opened up near Te Puke from which supplies will be drawn to ballast the next section of the line, and also for the formation and maintenance of roads by the local bodies of the district. A branch line two miles and three-quarters in length is required to carry the material to the main line, and this branch is also included in the schedule to the Railways Authorization Bill. The construction of the branch has already been put in hand.

The sum of £2,000 appears on the estimates under the heading of Te Maunga Northwards. This is for the purpose of commencing the approaches to the bridge across the Tauranga Harbour.

From the Gisborne end construction-work has been pushed on vigorously during the year, and the advance parties are now at work within three miles of Motu Township, or forty-eight miles from Gisborne. The terminus of the opened line is still at Otoko, but the rails are laid and the line partly ballasted up to Matawai Station, thirteen miles ahead, to which point a temporary goods and passenger service is being run daily. The works on this section have been of an arduous and varied character, comprising heavy cuttings, banks (up to 81 ft. high), one tunnel, and five steel and concrete viaducts of an aggregate length of 947 ft., and ranging in height from 42 ft. to 73 ft. above the streams which they cross. Material for ballast has to be hauled from Puha, on the opened line, a distance of twenty-two miles, most of which is on steep grades.

Between Gisborne and Napier earthworks are practically completed for 10½ miles between the junction of Makaraka and Ngatapa. Several bridges have, however, still to be built on this length. Seven small contracts have been let for earthworks on the next section, at reasonable prices, and the contractors have commenced work. A strong party is engaged surveying the permanent location of the line ahead, and has already covered a length of twenty-four miles from Ngatapa. At the Napier end construction was suspended in October, 1912. Negotiations have been proceeding for some time between the Public Works Department on the one hand and the Napier Harbour Board and the Hawke's Bay County Council on the other in regard to the construction of a combined railway and road embankment and bridge across the Inner Harbour. There is no reason now why a satisfactory settlement of all difficulties should not be arrived at, and the sum of £10,000 has accordingly been placed on the estimates towards giving effect thereto. This embankment will connect the existing railway-line at Port Ahuriri with the earthworks already constructed on the northern side of the harbour.

The expenditure during last financial year on the different sections of the East Coast Railway was as follows:—

	£
Waihi to Tauranga	5,363
Tauranga to Taneatua	28,462
Gisborne to Motu	57,548
Gisborne to Napier, north end	15,677
Gisborne to Napier, south end	11,438

For the current year votes are proposed as under:—

Waihi to Tauranga	10,000
Te Maunga Northwards	2,000
Tauranga to Taneatua	50,000
Gisborne to Motu	60,000
Gisborne to Napier, north end	35,000
Gisborne to Napier, south end	10,000

STRATFORD-MAIN TRUNK.

The section to Pohokura, 31½ miles from Stratford, was opened for traffic in August, 1912. Since then the 31-chain tunnel beyond Pohokura has been finished, heavy construction-works, with seven small bridges between the tunnel and Whangamomona, completed, rails laid into the station-yard, and ballasting almost finished. The section to Whangamomona will shortly be opened for traffic, and the train service will save settlers the difficult road journey over the Whangamomona Saddle. Beyond Whangamomona earthworks are nearing completion for over five miles, but the tendency of the country to slip in the cuttings has necessitated two small deviations. A 23-chain tunnel beyond Tahora has been pierced, and enlargement is now in progress. Four small bridges on this section are also in course of construction, the whole of the works covering a length of over seven miles beyond Whangamomona. The broken nature of the country to be traversed between Tahora and the Ohura Valley involves examination of several possible routes, and careful trial surveys of different suggested lines have been made during the past two or three years. The most favourable route appears to be via the Raekohua Stream, across the Tangarakau River, then through the Maraekowhai Block to the Haeo Valley, and the line will probably be located along this route.

At the eastern end, where construction-works were commenced in November, 1911, considerable progress has been made. As the country traversed for the first few miles from the Main Trunk line was not roaded, a service road nearly eight miles in length had first to be made across a broken range of hills. This has now been completed and metalled. The railway-formation is in progress for one mile and a half, and a contract has been let for the construction of the Okahu Tunnel, 74 chains in length, at a cost of £97,000, which also covers the formation of about a mile and a half of line in addition to the tunnel. Four small contracts have been let for formation-works which will carry the line into the Ohura Valley, six miles from the junction, and it is proposed to let further contracts of similar nature and extent as the work progresses.

The expenditure on this line during the past financial year amounted to £72,843 at the western end, and £22,448 at the eastern end. For the current year a total vote of £85,000 is proposed.

Mount Egmont Branch.

Trial surveys have been made to locate the most favourable line to the proposed quarry, and tests made to determine the extent of the rock at the suggested site. Three small bridges have been built, and some bush-clearing done adjacent to the line.

Expenditure during last financial year amounted to £4,657, and for the current year a vote of £15,000 is proposed.

Opunake Branch.

Since April last surveys to determine the most favourable route for the recently authorized branch line to Opunake have been in progress, and the line has been located for a distance of about ten miles.

The expenditure on this survey was debited to the vote for surveys of new lines, but for the current year a special vote of £15,000 is proposed, to permit of construction-work being commenced.

Ohakune Raetihi Branch.

This line had to be relocated for the first two miles in consequence of an alteration in the junction-point. On the completion of the resurvey a small amount of formation-work was done over the first mile. Twelve small contracts are now being let, which will carry the line about half-way to Raetihi, and if the results are satisfactory further contracts of the same nature will be arranged.

The expenditure during last financial year was only £2,022, but for the current year a vote of £20,000 is proposed.

Manawapou Deviation.

The earthworks for the Manawapou deviation improvements on the Wanganui – New Plymouth line are finished as far as practicable, pending completion of the viaduct. The construction of the latter is in hand. The expenditure out of last year's vote was £4,007, and for the current year £1,000 is asked for.

Featherston–Martinborough.

This line was included in last year's Railways Authorization Act, to serve the large area of settled land of which Martinborough is the centre, and it has been decided to commence its construction this year. A vote of £5,000 is accordingly provided.

Trial surveys of alternative routes have been made, and the location survey of the adopted line is nearing completion. This railway will be of comparatively light formation, with easy curves and gradients, the bridges over the Tauherenikau and Ruamahunga Rivers being the chief items in construction.

SOUTH ISLAND MAIN TRUNK.

At the northern end the line is open to Ward. From there to Mills, eight miles farther south, the formation is now constructed and ready for platelaying, with the exception of some light earthwork near Mills Station. This section includes some heavy cuttings and fillings, a tunnel $8\frac{1}{4}$ chains long and a combined railway and road bridge over the Ure River which is now nearly completed. To the south of the Ure Bridge, where the formation is through sandhills, marram-grass has proved entirely successful for heavy sandy batters, banks, and sand-drifts, but experiments with other binding-plants resulted in comparative failure. No rails have yet been laid beyond Ward, but large supplies of rails, sleepers and other permanent-way material are being forwarded to the rail-head, almost the whole quantity required for the eight miles to Mills having already been received there and stacked ready for use.

The section from Mina to Parnassus, eight miles and a half in length, at the southern end of the line, was completed and opened for traffic by the Railway Department in September, 1912. Formation-work, which had extended over the next four miles, has been suspended, and is not likely to be resumed during the current year.

The expenditure during last financial year amounted to £21,877 at the north end and £23,964 at the south end. For the current year a total vote of £20,000 will be required.

MIDLAND.

At the Nelson end, since the opening of the section to Glenhope on the 2nd September, 1912, construction-work was carried on with a reduced number of men over about two miles of the route towards Murchison until April last, when the work was suspended. It is not proposed to resume the construction of this section of the line during the current year, but the road between Glenhope and Murchison will be made more suitable for motor traffic.

On the Reefton–Inangahua Section the formation-work to the proposed station near the Inangahua Junction has been completed, rails laid, and the ballasting is well under way. This station will be the terminus of the line for the present, as it is not proposed to undertake any work beyond the Inangahua River this year.

On the Canterbury side of the dividing range formation has been practically completed between the Cass and Bealey Flat, and a train service to the temporary station at Halpin Creek has been inaugurated. Floods in the Waimakariri caused considerable damage to the formation during the year, which has been repaired, and measures taken for the future protection of the railway.

Messrs. John McLean and Sons, contractors for the construction of the Arthur's Pass Tunnel, were relieved of their contract and the work taken over by the Government on the 28th December, 1912, in pursuance of a recommendation of a parliamentary Select Committee, since which it has been carried on, principally by day labour, from the Otira end, under the direct supervision of Public Works Engineers. At the Bealey end excavation by co-operative contract was tried, but was not successful, and the experiment was not persevered with. From the Otira portal the bottom heading is now in 2 miles 12 chains, and the tunnel fully excavated and lined for 20 chains less. At the Bealey end the figures are: Bottom heading, 45 chains; excavation to full size and lining, 33 chains. Thus there remains 2 miles 48 chains between the headings, and 3 miles between the points to which the enlargement and lining have been carried on either side. A larger number of capable men could be employed to advantage on this work, but the best men are not obtainable in large numbers.

The expenditure on the different sections of the Midland Railway during last financial year was as follows:—

	£
Nelson end	23,366
Reefton end	10,073
Otira–Bealey	61,809
Bealey–Cass	36,786

For the current year appropriations are proposed as follows:—

	£
Nelson end	5,000
Reefton end	10,000
Otira–Bealey	70,000
Bealey–Cass	50,000

WESTPORT–INANGAHUA.

The formation-work, principally rock-cutting, which was in progress under contracts at the commencement of the year, has continued steadily and is still in hand. In all, eighteen contracts have been let, practically to small parties who carry out the work themselves. Six contracts have been satisfactorily completed, most of the others are making good progress, while one which was abandoned has been relet to a fresh party. The work in hand will carry the line to a point ten miles from Westport, and bushfelling and clearing is in progress over a further length of two miles. Beyond this point it is not proposed to undertake construction-work for the present.

During last financial year the expenditure on this line amounted to £18,711, and to meet liabilities during the current year a vote of £20,000 is proposed.

GREYMOUTH – POINT ELIZABETH.

The extension of this railway to serve the new State coal-mine has been completed, and the line, which has a third rail in the centre on the incline from Dunollie to the new terminus, is now in operation. The country being very steep and rough, there has been much trouble from slips, but protective works have been put in where necessary, and the extension is now ready to hand over to the Railway Department for regular traffic.

The expenditure during last financial year on this line was £9,980, and for the current year a vote of £20,000 is asked for.

CULVERDEN–WAIAU.

An extension of the existing railway from Culverden to the south bank of the Waiau River opposite the township of the same name was authorized last session. The line will be fourteen miles long, inexpensive to construct, will traverse a closely settled area, and serve a large productive district beyond, the output of which has hitherto been restricted on account of its distance from the railway.

A vote of £5,000 for making a commencement with this extension is provided on the current year's estimates.

WAIMATE BRANCH EXTENSION.

There was no expenditure out of last year's vote of £5,000 for the extension of the railway from Waihao Downs to Waihaorunga, as it was not found practicable during the year to detach a suitable engineer to carry out the necessary survey of the route. The vote of £5,000 is, however, repeated on the current year's estimates.

OTAGO CENTRAL.

Recent examination by engineers of the route between Clyde and Cromwell proves that, provided the rate of speed is restricted, a line of the standard gauge with sharper curves, occasional slightly increased grades, and generally lighter formation can be taken for most of the way alongside the present road and constructed at far less cost than the original estimates indicated. Such a line would admirably serve the purposes of the settlers in the Upper Clutha Valley and enable large quantities of grain of the highest quality, and also fat stock and fruit, to be conveyed to the coast. At present this is impossible, as it costs 1s. per bushel to cart grain from Hawea to Clyde, and fat lambs would become stores by the time they reached the present terminus.

A vote of £7,000 is included in the estimates to permit of construction-work being commenced as soon as the necessary re-survey is completed.

LAWRENCE–ROXBURGH.

The Big Hill Tunnel was completed in December last, and formation-works for a length of two miles and three-quarters beyond the tunnel are practically finished. It is proposed to put platelaying in hand with a view to opening a section of three miles to Athenæum Flat for traffic as early as possible. Very little more in the way of construction-work will be required to permit of rails being laid to Beaumont Station, two miles and a half farther on, so that the completion of the line to that point may be looked for at a fairly early date.

The expenditure on this line during the last financial year amounted to £17,392, and for the current year a vote of £10,000 is proposed.

CATLINS–WAIMAHAKA.

The terminus of the opened line is still at Houipapa, but rails are laid and the line ballasted up to Caberfeidh Station, 11½ miles farther on, to which point a temporary goods and passenger service is in operation for the convenience of settlers. The roads in this district are not good, and a service tramway is laid ahead of construction-works to facilitate the transport of plant and supplies for the men. A bridge to carry the railway over the Maclennan River is being erected under contract, and on its completion will depend the opening of the line to Papatowai Station. Bushfelling and a little formation extending four miles beyond Papatowai are in hand.

The expenditure on this line during last financial year amounted to £29,291, and for the current year a vote of £30,000 is proposed.

WINTON – HEDDON BUSH.

There was no expenditure out of last year's vote for the proposed branch line from Winton to serve the productive agricultural district of which Heddon Bush is a convenient working-centre. There were local differences of opinion as to whether the district could not be more effectively served by a branch from the Riverton line, but the difference has now been settled in favour of the Winton connection, thirteen miles in length, and the vote of £8,000 to commence the construction of this line is renewed on the current year's estimates.

OREPUKI–WAIAU EXTENSION.

The question whether the district surrounding Orawia shall be connected by rail with Orepuki or with Waikouro has not yet been decided. Further careful consideration is necessary, and the Engineer-in-Chief will visit the district during the recess and report to me thereon.

TOTAL APPROPRIATIONS FOR RAILWAY-CONSTRUCTION.

In addition to the votes already mentioned, an appropriation of £1,000 is required to provide for liabilities on account of the Kawakawa–Grahamtown Railway that did not come to charge against last year's vote; £1,000 will also be needed for old land claims, damages, and other similar charges; £5,000 for surveys of new lines; and £90,000 for permanent-way materials; thus bringing the total appropriations for railway-construction purposes up to £825,000.

OTHER RAILWAY-WORKS.

During the year under review the sum of £300,059 was spent by the Railway Department on rolling-stock, tarpaulins, pneumatic coaling-cranes, Westinghouse brake, steam heating-gear, workshops machinery, and steamer for Lake Wakatipu.

The sum of £164,577 was spent on extension of station-yards, purchase of land, additions to workshops, cranes, bridge-work and subways, fire-prevention services, wharves, gasworks, and extension of signal and interlocking system, tablet installation, telegraph and telephone facilities, duplication of line, reduction in grades, and improvement of curves.

A further extension of the duplication of the Dunedin–Mosgiel line was opened during the year, and the work of boring the Chain Hills Tunnel and completing the line from there to Mosgiel is in hand. Bad ground was met with during the year, and this materially interfered with boring operations. As more favourable indications are now in evidence it is hoped that better progress will in future be made towards the completion of the tunnel, of which about 15 chains still remain to be bored.

The expenditure last year on railway-duplication and contingent works was £30,245, principally on the Dunedin–Mosgiel line.

On the Main Trunk line between Wellington and Auckland considerable work has been done in the direction of improving the grades in the vicinity of Buckland, Tuakau, and Pukekohe. The cost of grade-improvements on the North Island Main Trunk line was £33,031.

The work of reclaiming land at Mechanic's Bay, Auckland, for use as a site for the new station-yard is in hand, and the sum of £11,337 has already been paid to the Auckland Harbour Board in respect thereof.

The amount proposed to be voted for the current year on account of "Additions to open lines" is £500,000, of which sum £300,000 is for new rolling-stock and workshops machinery, and £200,000 for various new works.

A vote of £40,000 is asked for on account of the Dunedin–Mosgiel deviation.

ROADS AND BRIDGES.

The provision made on last year's appropriations for road and bridge works under all votes and accounts (including the Consolidated Fund vote for maintenance) amounted to £746,950.

The total amount authorized for expenditure during the financial year, including the unexpended balance of authorities brought forward at the 31st March, 1912, amounted to £845,248. The total expenditure for the year amounted, however, to only £468,972, leaving an unexpended balance of authorities amounting to £376,276 at 31st March last. Between the 1st April and 30th September a further £337,378 was authorized, and expenditure to the extent of £231,605 was brought to charge. The large amount of money which has been standing as authorized for expenditure, compared with the actual disbursements, indicates that the temporary restriction placed upon the authorization of new votes after the close of last session had but little effect on the expenditure. In my last Statement I expressed the opinion that it was almost impossible, under the existing conditions, to expend within any year the amount of money voted for that year for road and bridge works. The experience gained during the past twelve months has confirmed me in this opinion.

Last year I referred to the disinclination of local bodies to make satisfactory provision for the maintenance of main roads. In localities where the main road passes through unoccupied Crown lands, sparsely settled districts, or Native lands, whence little or no revenue in the way of rates can be collected, such a feeling is to a great extent justified. All main roads, however, do not come under the above category, nor will it be an easy matter to define what constitutes a main road. I hope, however, during the recess to find a satisfactory solution of this problem, as also to the equally abstruse one of improving the present method of distributing grants for roads and bridges.

ROADS ON GOLDFIELDS (MINES DEPARTMENT).

The total authorizations under this head last year amounted to £74,416, on account of which a vote of £50,600 was taken. The expenditure during the year was £36,761.

The sum proposed to be authorized for the current year is £65,743, on account of which a vote of £50,000 is asked for.

TOTAL APPROPRIATIONS FOR ROADWORKS.

Last year's appropriations were as under :—	£
Roads, &c.	328,275
Backblock roads	201,575
Roads on goldfields	50,600
Opening up Crown Lands for Settlement Account	100,000
National Endowment Account	19,200
New Hutt Road	5,300
Maintenance of roads (Consolidated Fund)	42,000
Total	£746,950

Total Appropriations for Roadworks—*continued.*

The provision for the current year is as under :—

	£
Roads, &c.	330,000
Backblock roads	200,000
Roads on goldfields	50,000
Opening up Crown Lands for Settlement Account	100,000
National Endowment Account	22,750
New Hutt Road	4,000
Maintenance of roads (Consolidated Fund)	45,000
Total	£751,750

DEVELOPMENT OF GOLDFIELDS.

The value of the mineral-output for the year amounted to £3,042,224, being a decrease as compared with the output of the previous year. Work in the mines was hampered considerably by strikes, but as this year this trouble has not existed to anything like the same extent it is anticipated the output will be in excess of that of last year.

Expenditure under this heading during the year was £10,644, and a vote of £9,300 is proposed to be taken this year.

PUBLIC BUILDINGS.

The total expenditure on public buildings during the last financial year amounted to £611,041, made up as follows :—

	£
New buildings (Class XVIII, Public Works Fund)	445,192
Maintenance-works (Class V, Consolidated Fund)	73,030
Maintenance-works, schools (Class XV, Consolidated Fund)	92,819
	£611,041

For the current year the following appropriations are proposed :—

	£
New buildings (Public Works Fund)	486,000
Maintenance-works (Consolidated Fund)	68,689
Maintenance-works, schools (Consolidated Fund)	102,200
Contribution to fund for renewal or reinstatement of buildings damaged or destroyed by fire	10,000
	£666,889

General.

The foundations for the proposed new Parliament Buildings have been completed ready for the superstructure, and the rearrangement of the grounds surrounding the site was finished in time to display a creditable sward on the lawns in the early spring. The adjacent streets have been widened, an ornamental fence built around the property, and preparations made for the erection of the new building, for the first portion of which tenders have been received and are now under consideration. The total expenditure on building and grounds during the financial year amounted to £15,841, and £2,944 was spent on widening and altering the grades of adjacent streets.

The most important departmental building completed during the year was the new offices facing Cathedral Square and Worcester Street, Christchurch, which will accommodate most of the officials now located in the old Provincial Buildings, as well as an appreciable number occupying rented offices in various parts of the city. A large vote is provided on the estimates for this building, principally to cover liabilities existing at the end of the financial year.

The current year's vote provides also for the new departmental buildings at Gisborne and Stratford, additions at Blenheim, the completion of similar buildings at Hamilton, New Plymouth, and Hokitika, and for the erection of new public-works and marine stores on the reclaimed land at Pipitea, necessary owing to the sites of the present buildings being required for railway purposes. Provision is also made for additions to the Government Printing Office, already in progress under contract.

JUDICIAL.

Courthouses.—Substantial buildings at Masterton and Greymouth were comcompleted during the financial year, and one at Auckland has been finished since its close.

The current year's vote provides for liabilities in connection with these buildings, as well as for new Courthouses at Kaitaia, Waipu, Te Puke, Wairoa, Martinborough, Raetihi, Motueka, Amberley, Balclutha, Wyndham, and Chatham Islands. Substantial additions are to be carried out at Hikurangi, Wanganui, Lawrence, and at the Supreme Court House, Wellington, while the vote also covers minor additions and improvements to existing buildings at various other centres.

Gaols.—The principal expenditure during the financial year was in connection with the buildings at Auckland and Invercargill, and additions at Addington and Timaru.

Provision is made on the current year's estimates for commencing the erection of buildings at the Waikeria Reformatory Farm, in the Waikato district; for work in progress at Auckland and Invercargill; for new buildings at Palmerston North and Picton; and for warders' cottages at Wellington, Lyttelton, and Invercargill.

Police-stations.—There has again been considerable expenditure on the erection of police-stations at various centres throughout the Dominion, the larger items being for buildings at Maungaturoto, Gisborne, Taumarunui, Murchison, and Waipu. Stations were also provided during the year at Warkworth, Howick, Te Kuiti, Otorohanga, Wakefield, Cobden, and Islington.

The Lambton Quay station in Wellington no longer provides adequate accommodation for the large number of men who have their headquarters there, and it is proposed to erect a new station on a central site in the city formerly occupied by the Theatre Royal. A substantial vote for this purpose appears on the estimates. Negotiations are also in progress for the acquisition of a site upon which to erect a new building to accommodate the police officers now using the Manners Street Station.

On the current year's estimates provision is made for new buildings at Houhora, Northcote, Takapuna, Mount Eden, Mount Roskill, Epsom, Ponsonby, Devonport, Herekino, Papakura, Hamilton, Ngaruawahia, Huntly, Raurimu, Tokaanu, Whangamomona, Tokomaru Bay, Motu, Patutahi, Porangahau, Masterton, Brooklyn, Eastbourne, Island Bay, Karori, Charleston, Ahaura, Stafford, Ross, Fendalton, Coalgate, Darfield, Ashburton, Waitati, Clyde, Middlemarch, Caversham, Mornington, North-east Valley, Kaitangata, Tapanui, Mataura, Nightcaps, North Invercargill, and Gladstone.

Increased accommodation is being provided by means of additions or alterations at O'Rorke Street (Auckland), Martinborough, Wanganui, Mohaka, Mount Cook (Wellington), and Dunedin.

POST AND TELEGRAPH.

The principal items of expenditure during the past financial year were in connection with the large new buildings at Auckland and Wellington, which were completed and opened for public business on the 20th and 26th November, 1912, respectively. To meet the continuous growth of the Department's business it is still necessary to provide additional accommodation, and appropriations for this purpose amounting to £206,011 are proposed on the current year's estimates.

During the last financial year buildings for postal and telegraph purposes were erected at Kawakawa, Ponsonby, Te Aroha, Matamata, Putaruru, Waihou, Whangamomona, Ohura, Clive, Awakino, Opotiki, Otane, Kaiwarawara, Sydenham, Pleasant Point, Ravensbourne, Kaitangata, Hawea Flat, and Balfour, while additions and alterations have been carried out at Otahuhu, Taumarunui, Inglewood, Carterton, Wellington Telephone Exchange, Cheviot, Sumner, and Lyttelton. A large brick building has been erected on the reclaimed land at Wellington for use as a bulk store.

In addition to amounts previously authorized but not yet expended, provision is made on the current year's estimates for new post-office buildings at Papatoetoe, Mamaku, Manunui, Patea, Tokomaru, Kimbolton, Khandallah, Island Bay, Woodend, Duvauchelles, Methven, Dunedin, St. Clair, and Riversdale; for alterations and additions at Hamilton, Gisborne, Raetihi, Palmerston North, and Christchurch; also for accommodation for the automatic-telephone system at Auckland, Hamilton, Masterton, Wellington, Blenheim, Oamaru, and Dunedin.

MENTAL HOSPITALS.

The principal expenditure during the past financial year was in connection with the main block of the new Mental Hospital at Tokanui, which was completed under contract in February last. Nine cottages have been built for the staff, and temporary accommodation provided for patients and attendants. A substantial vote is proposed to continue work in connection with this Hospital during the current year. A new auxiliary building at Porirua was completed and equipped; additions made to the Sunnyside institution, and alterations to provide additional accommodation were carried out at the Simla auxiliary at Seacliff. An additional block of buildings at Waitati was almost completed.

Since the close of the financial year two contracts have been let for auxiliary buildings at Auckland Mental Hospital, for which a vote of £29,000 is provided, and items to cover necessary works at Porirua, Sunnyside, Waitati, Seacliff, and Nelson also appear on the estimates.

AGRICULTURE.

Further expenditure is contemplated this year to provide up-to-date buildings and equipment for the experimental farms, to make these institutions object-lessons in all that makes for effective working and economy. When the farms were started there was an almost entire absence of modern equipment, and improvements are being effected generally, the expenditure being spread over a number of years.

An experimental farm is being established at Mamaku, on which investigations into the cause of bush sickness in cattle may be continued. At Ruakura drainage operations which have materially increased the fertility of the land are to be continued. A noteworthy increase in the numbers of purebred live-stock imported involves extensions of the accommodation at some of the quarantine stations. At one or two places where resident officers find it practically impossible to rent suitable houses the Department is providing residences at moderate cost.

HOSPITALS.

Under the heading "Public Health, Hospitals, and Charitable Institutions," there was an expenditure last year of £9,126 out of the Public Works Fund. On the current year's estimates provision is made for £25,530, of which it is anticipated that £10,000 will come to charge before the 31st March next. Last year's expenditure included hospital accommodation at Rotorua, and an up-to-date Maternity Hospital at Wellington. It is proposed to provide similar institutions at Auckland and Christchurch, and the largest items on the estimates relate to these respective proposals.

SCHOOL BUILDINGS.

The expenditure during the past year was £105,000, of which nearly £83,000 was paid to the respective governing bodies for the erection of schools, additions to existing buildings, equipment and sites for public schools, teachers' residences, technical and secondary schools, and University colleges. The purchase of the Stoke Industrial School property was completed and two residences provided. An addition was made to the day school at Weraroa Training Farm, and a gymnasium and cottage provided at Burnham Industrial School. The Sumner School for the Deaf was enlarged and a workshop built. New Native schools were established at Taemaro (Bay of Islands), Waiorongomai, and Horoera (East Coast).

The vote proposed for the current year includes a substantial grant for a new site and building for the Auckland University College, as well as the usual grants for buildings and sites to the several Education Boards, Technical and Secondary Schools and University Colleges, and also provision for further buildings required in connection with the School for the Deaf, the Otekaike Home, and the different Native and Industrial Schools.

WORKERS' DWELLINGS.

The expenditure under this head during the past year amounted to £46,455—an appreciable increase over that of the preceding year. The demand for workers' dwellings under the conditions provided in the Act is increasing, and for the current year an authorization of £75,000 is proposed for the acquisition of land, road-formation on sites, and erection of buildings. On account of this sum a vote of £65,000 is asked for for the requirements of the current year.

DEVELOPMENT OF WATER-POWER.

Satisfactory progress has been made with the Lake Coleridge power-works. The works now under construction provide for headworks and buildings for supplying 10,000 horse-power, whilst the plant on order is capable of supplying 4,000 horse-power after allowing for one spare unit. Transmission lines will be erected in duplicate between Lake Coleridge and Christchurch, where a substation will be built containing the necessary transforming plant, also in duplicate. In connection with this substation a standby plant consisting of oil-engines driving three-phase generators will be installed so as to maintain the supply to Christchurch and district in the event of failure of the transmission line. From the substation, which is situated in Addington, power will be supplied to Christchurch and to the surrounding district for a radius of twenty miles or thereabouts.

In connection with these works a total of forty-two contracts have been entered into, the contract sums amounting to £167,686, in addition to which the Department is carrying out, by direct labour or on the co-operative principle, inlet works at the lake entrance of the tunnel and outlet works at the connection between the tunnel and the pipe-lines, foundations to pipe-lines, excavations for power-house foundations and for tail-race, maintenance of roads between Coalgate and Coleridge, and transportation and erection of plant.

The total expenditure to date is £82,897, whilst the liability amounts to £121,236, and it is estimated that a sum of £48,484 is required to complete the works now under construction, making a gross total of £252,617.

A contract has been entered into with the Christchurch City Council to supply them with power as from 1st May next at varying rates according to the load. At present there is a prospect that the works will be completed in time, the determining feature being the pipe-line, the contract for which is much behindhand.

Negotiations for a supply of power to the Christchurch Tramway Board are proceeding, and similar negotiations will shortly be opened with other power users and local authorities within the area of supply from the substation. Last year's expenditure in connection with the development of water-power amounted to £35,009, and for the current year a vote of £200,000 is provided.

Licenses for Electric Light and Power.

Numerous licenses have been issued to local authorities and companies to enable them to distribute electricity for light and power purposes, also sundry water-power licenses.

IRRIGATION.

Steady progress was made during the year with the development of the scheme to irrigate the Ida Valley from reservoirs constructed in the Manorburn and Poolburn Valleys. A road has been made between the head of Ida Valley and the site of the proposed dam on the Manorburn, to permit of the transport of heavy materials for construction-work. Excavation for the concrete dam has been taken out, and preparations made to push the work on during the coming summer. The Bonanza Water-race has been enlarged for some distance to carry water for irrigation in a portion of the valley, and water was turned on to some of the land commanded by the race during last spring and summer. Diverting weirs in the Poolburn and Moa Creek have been laid out and a good start made with the excavations of Black's No. 3. race on the west side of the valley. Unfavourable weather-conditions and excessive snowfall in the winter interfered somewhat with the working of the teams during the greater portion of the year. The survey of the water-race from the Manuherikia River to the flat between Clyde and Alexandra having been completed, the work of constructing same will be undertaken at once.

The expenditure out of last year's vote amounted to £14,689, but a much larger sum will be required this year, and a vote of £35,000 is accordingly provided on the estimates.

WAIHOU AND OHINEMURI RIVERS IMPROVEMENT.

Detail works in accordance with the authorized scheme for the improvement of these two rivers and of the adjacent land have been vigorously pushed on. The destruction of growing willows along the banks of the Waihou and Komata tributary and the removal of boughs and snags from the streams has proceeded over a distance of eight miles on either bank. A contract, let in January, 1912, for straightening the courses of the Waihou and Ohinemuri rivers by means of the Ngararahi and Koutou cuts, designed to lessen the risk of damage by overflow, is approaching completion. Another contract—for constructing a stop-bank along the right bank of the Ohinemuri alongside the town of Paeroa—was let in February last, and the contractor is making fair progress with his work. A site for a flood-gate on Cooper's Creek near its confluence with the Ohinemuri River has been selected, and the construction of the gate is in hand. Extensive surveys are necessary in connection with these river-improvement works and have been in progress throughout the year whenever weather-conditions were favourable. Surveys have also been made of lands injured or destroyed by silt for the guidance of the Commission appointed under the Act of 1910 to assess the amount of compensation payable for damaged land to be taken in accordance with the provisions of the special Act authorizing the improvement schemes. A contract was placed in April last with the Stevenson and Cook Company, of Dunedin, for the manufacture of a suction-dredge for use in carrying out the improvement scheme, the time fixed for its completion being the middle of April next, and the machinery required for its equipment has also been ordered.

Last year's expenditure in connection with these river-improvement works amounted to £9,555. For the current year a vote of £30,000 is asked for.

TOURIST AND HEALTH RESORTS.

The expenditure under this heading for the year amounted to £12,906, the principal part being in connection with the erection of the new hostel at the Hermitage.

At Hanmer Springs boring for a further supply of hot mineral water was undertaken and was rewarded with success. The water is now laid on to the bath buildings and swimming-pools.

At Rotorua further improvements were made to the reserves and buildings, also to the drainage and water-supply and electrical works.

It is stated that a practicable track can be made from Milford Sound to the head of Lake Wakatipu via the Cleddau Valley. In the event of this turning out to be correct, steps will at once be taken to survey and form the track.

For the current year a vote of £16,000 is provided, with which it is intended to complete and equip the new hostel at the Hermitage, make much-needed extension to Waitomo Caves hostel, and further develop and improve other scenic districts and resorts.

TELEGRAPH-EXTENSION.

The expenditure on telegraph and telephone extension during the year amounted to £251,375.

Among the larger works undertaken may be mentioned the construction of the following land lines: Ohakune–Raurimu, Napier–Waipawa, Wellington–Palmerston North, Masterton–Alfredton, Christchurch–Kaikoura, Christchurch–Rakaia, Christchurch–Timaru, and Invercargill–Lumsden, while high-power wireless stations at Awanui and Awarua and a low-power station at Wellington have been completed and opened for business.

The vote for the current year amounts to £376,000, made up as under:—

	£
New telegraph and telephone lines	75,000
New telephone-exchange connections	220,000
Wireless installations	30,000
Submarine cables	10,000
Automatic-telephone installations	41,000
	£376,000

LIGHTHOUSES, HARBOUR-WORKS, AND HARBOUR DEFENCES.

Lighthouses.

The lighthouse works undertaken during the year were—the completion of the new lighthouse on Castle Point and the automatic light on the Chickens Island, and the erection of a new automatic light at the entrance to Whangarei Harbour, towards the cost of which the Government contributed a pound-for-pound subsidy. The apparatus for the new automatic light in Cook Strait has been ordered, and should arrive in the Dominion shortly. Arrangements are now being made for the construction of the tower.

The apparatus for the new automatic light on Channel Islet, in the Hauraki Gulf, has arrived in Wellington, and the erection will be commenced shortly.

A contract has been let for the erection of a new store for the Marine Department in Wellington, and the erection of the structure has been commenced.

A new road to connect Godley Head Lighthouse with Lyttelton is under construction.

The sum of £7,375 will be required for lighthouse-works during the current financial year.

Harbour-works.

The works carried out during last year were—the erection of a section of a breastwork along the face of the reclamation at Kohukohu; the erection of wharves at Tangaihi (Kaipara), Ruakiwi (Whaingaroa), Lemon Point (Kawhia), Little Wanganui and German Bay (Akaroa), and the completion of the wharf at Half-moon Bay, Stewart Island; removal of rocks in the Kaipara River; improving navigation of the Wade River; roading the Manukau Harbour Endowment; improving the entrance to Awakino River; erection and equipment of Meteorological Observatory in Wellington; harbour-improvements at Takaka and Karamea; and the installation of a more powerful oil-engine winch for the fishermen's boat-slip at Nugget Bay.

The new works to be provided for during the current year are—further grants for the Kohukohu reclamation breastwork; the deepening of the Mahurangi River; the Karamea River improvements and the Nugget Bay fishermen's landing; grants for ferry-slips at Raupo and Tikinui (Kaipara); improving navigation of Taheke, Wade, and Waikato Rivers; wharves at Pahia (Bay of Islands), Whangamarino Falls, Raglan, Kutarere (Ohiwa), Collingwood, and Taieri Mouth; and harbour-improvements at Wairau.

An authorization of £15,811 is required for harbour-works, on account of which a vote of £11,000 is proposed for the current financial year.

Harbour Defences.

A 6 in. Mark VII battery at Auckland has been constructed, principally by prison labour, and other minor works have been carried out in other parts of the Dominion. The expenditure last year was very small, but a vote of £3,000 is asked for the current year.

GROSS TOTAL APPROPRIATIONS.

In addition to the votes already specially mentioned the estimates make provision for the undermentioned services:—

	£
Departmental	64,200
Immigration	36,000
Contingent defence	50,000
Lands improvement	31,700

thus bringing the total amount of the proposed appropriations, including special accounts, up to £3,427,325, as against £3,143,111 voted, and £2,520,799 actually expended last year.

CONCLUSION.

The rapid increase of settlement necessitates year by year a corresponding increase of road and bridge construction, and the end thereof is not yet in sight. There are still far too many settlers who have had for years past either no access or quite inadequate access to their properties, but the number of these I am pleased to say is diminishing. Once these arrears have been overtaken it will be a much easier task to provide only for the needs of new settlers.

PUBLIC WORKS STATEMENT, 1913.

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TABLE No. 1.

SUMMARY showing the TOTAL EXPENDITURE on PUBLIC WORKS and OTHER SERVICES out of PUBLIC WORKS FUND to 31st March, 1913, and the LIABILITIES on that Date.

Number of Table containing Details.	Works.	Total Net Expenditure to 31st March, 1912.	Expenditure during Twelve Months ended 31st March, 1913.	Recoveries on Account of Services of Previous Years.	Total Net Expenditure to 31st March, 1913.	Liabilities on 31st March, 1913.	Total Net Expenditure and Liabilities.	Works.
		£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	
3*	Railways	28,679,914 8 8	1,148,832 4 5	29,528 1 4	29,799,218 11 9	255,340 3 0	30,054,558 14 9	Railways.
4†	Roads	9,349,519 12 11	374,345 13 4	..	9,723,865 6 3	162,258 11 6	9,886,123 17 9	Roads.
5 and 5A	Development of goldfields	818,173 3 2	10,643 18 8	1,015 0 0	827,802 1 10	..	827,802 1 10	Development of goldfields.
6	Telegraphs	2,025,750 14 6	251,374 13 8	..	2,277,125 8 2	171,297 1 0	2,448,422 9 2	Telegraphs.
7	Public buildings	5,042,032 8 0	445,192 2 6‡	..	5,487,224 10 6	80,910 10 11	5,568,135 1 5	Public buildings.
8	Lighthouses, harbour-works, and harbour-defences	1,081,422 2 2	16,785 1 10	.	1,098,207 4 0	527 9 8	1,098,734 13 8	Lighthouses, harbour-works, and harbour-defences.
..	Departmental	726,669 9 3	57,425 11 1§	..	784,095 0 4	566 16 8	784,661 17 0	Departmental.
..	Development of water-power ..	18,450 14 1	..	..	18,450 14 1	..	18,450 14 1	Development of water-power.
18 of 1878	Coal-exploration and mine-development	10,835 8 0	..	..	10,835 8 0	..	10,835 8 0	Coal-exploration and mine-development.
11 of 1877	Aiding works on Thames goldfields ..	50,000 0 0	..	..	50,000 0 0	..	50,000 0 0	Aiding works on Thames goldfields.
..	Immigration	2,239,912 4 11	14,693 16 2‖	..	2,254,606 1 1	..	2,254,606 1 1	Immigration.
..	Purchase of Native lands	2,066,637 11 10	..	917 5 0	2,065,720 6 10	..	2,065,720 6 10	Purchase of Native lands.
..	Defence	920,418 14 1	23,790 2 1	..	944,208 16 2	..	944,208 16 2	Defence.
..	Charges and expenses of raising loans ..	1,242,422 19 8	1,269 3 1	..	1,243,692 2 9	..	1,243,692 2 9	Charges and expenses of raising loans.
..	Interest and sinking fund	218,500 0 0	..	..	218,500 0 0	..	218,500 0 0	Interest and sinking fund.
..	Rates on Native lands	68,671 16 10	..	..	68,671 16 10	..	68,671 16 10	Rates on Native lands.
..	Thermal springs	14,599 13 2	..	..	14,599 13 2	..	14,599 13 2	Thermal springs.
..	Tourist and health resorts	216,633 2 1	12,905 14 11	..	229,538 17 0	1,791 0 0	231,329 17 0	Tourist and health resorts.
..	Lands improvement	82,545 12 2	22,550 6 10	383 6 10	104,712 12 2	1,240 18 2	105,953 10 4	Lands improvement.
..	Payment to Midland Railway bondholders	150,000 0 0	..	..	150,000 0 0	..	150,000 0 0	Payment to Midland Railway bondholders.
..	Irrigation and water-supply¶ ..	4,356 5 0	..	..	4,356 5 0	..	4,356 5 0	
	Totals	55,027,466 0 6	2,379,808 8 7	31,843 13 2	57,375,430 15 11	673,932 10 11	58,049,363 6 10	Totals.

* Table 3 also includes expenditure under Wellington–Manawatu Railway Purchase. **Hutt** Railway and Road Improvement, and Railways Improvement Accounts. † **Table 4 also contains details of expenditure under Loans to Local Bodies and other Accounts.** ‡ **Includes £50 charged to "Unauthorized."** § Includes £439 7s. 6d. charged to "Unauthorized." ‖ Includes £237 8s. 4d. charged to "Unauthorized." ¶ Previously included under Lands Improvement.

Does not include expenditure on Wellington–Manawatu Railway Purchase, Hutt Railway and Road Improvement, and Railways Improvement Accounts.

Des	1905–6.	1906–7.	1907–8.	1908–9.	1909–10.	1910–11.	1911–12.	1912–13.	Total Net Expenditure to 31st March, 1913.
	£	£	£	£	£	£	£	£	£
Immigration .	8,753	14,353	9,132	15,075	17,003	9,441	11,681	†14,694	2,254,606
Public Works Depar	13,517	16,710	18,219	24,512	41,176	42,733	49,864	‡57,426	784,095
Development of Wa	2,901	4,664	315	..	..	1,021	9,082	..	18,451
Irrigation and Wate	..	..	..	..	..	1,562	2,794	..	4,356
Railways .. .	21,265	1,227,880	1,093,535	1,116,184	1,128,400	1,104,071 *Cr.* 652	1,125,905 *Cr.* 6,987	1,148,832 *Cr.* 29,528	29,799,218
Payment to Midland	..	..	..	..	..	..	..	..	150,000
Roads:—									
Roads North of	..	..	..	..	..	..	..	..	..
Main Roads .	306,065	308,500	285,248	422,174	297,932	229,537	383,511	337,584	..
Miscellaneous R	..	..	..	..	..	..	..	..	..
Roads to open u	..	..	..	..	..	..	..	..	..
Grants-in-aid .	..	..	..	..	..	..	..	..	..
Village Settleme	..	..	..	..	..	..	..	..	..
Local Bodies .	45,139	38,970	38,494	47,375	40,830	25,626	41,067	36,761	..
Roads on Goldfie	..	..	..	..	..	..	..	..	..
Miscellaneous .									
Development of T	..	..	..	..	..	..	..	..	..
Roads to give acc	..	..	..	..	..	..	..	..	..
Lands Improvem	..	..	..	..	..	..	..	..	..
Tot	351,204	347,470	323,742	469,549	338,762	255,163	424,578	374,345	9,723,865
Development of Gol	18,533	11,064	8,633	32,859	18,597 *Cr.* 1,000	10,845 *Cr.* 1,000	21,244 *Cr.* 30	10,644 *Cr.* 1,015	877,802
Purchase of Native	13,777	9,135	2,190	2,099	30,567	2,976 *Cr.* 2,286	*Cr.* 2,466	*Cr.* 917	..
Native Lands Purch	..	..	..	..	..	..	..	..	..
Tot	13,777	9,135	2,190	2,099	30,567	690	*Cr.* 2,466	*Cr.* 917	2,065,721
Telegraph Extensior	77,186	114,068	155,491	163,033	123,423	111,867	147,692	251,375	2,277,126
Public Buildings:—	2,231	14,216	16,260	39,635	41,964	44,044	†34,721	44,719	..
General (includi	71	1,047	4,119	5,172	3,157	237	2,004	18,806	..
	15,899	35,192	28,938	37,211	31,606	22,295	44,133	45,431	..
	28,419	43,918	43,724	62,262	68,574	117,815	130,815	122,999	..

Riversdale to Switzers		81,523 2 9	..	
Kelso to Gore		602 2 5	..	
Seaward Bush to Catlin's		183,798 9 11	..	
Otago Central		1,280,393 4 3	3 0 0	
Invercargill to Kingston—				
Main Line		330,073 18 7	..	
Mararoa Branch		27,216 18 7	..	
Makarewa to Orepuki and Waiau ..		328,672 12 5	..	
Thornbury to Wairio			..	
Forest Hill		22,983 14 5	..	
Expenses of Railway Commissions and other Expenditure not chargeable to Individual Lines		10,336 19 11	..	
Surveys of New Lines—				
North Island		30,009 6 4	..	
Middle Island		6,525 11 2	..	
Permanent-way for Railway Department ..		25,000 0 0	¶25,000 0 0	
Rolling-stock		5,141,805 9 0	..	
Stock of Permanent-way materials, 31st March, 1912	£102,850 4 4	102,850 4 4	..	
		30,486,011 1 1		
Stock of Permanent-way decreased by	£2,170 5 5	2,170 5 5	..	
Stock of Permanent-way materials, 31st March, 1913	£100,679 18 11	..	..	
Total		30,483,840 15 8	40,720 12 11	6

---

* Also includes value for £150,000 paid to debenture-holders under the Midland Railways Road and Railway Improvement Act Account. § Expenditure under Railway

** Includes amount expended on purchase of district railways, £477,487 7s. 11d.

TABLE No. 2.

GENERAL SUMMARY.

Showing Net Yearly Expenditure out of Public Works Fund, 1890–91 to 1911–12.

Description of Services.	Total Net Expenditure to 31st March, 189 .	Expenditure.																						Total Net Expenditure to 31st March, 1913.
		1891–92.	1892–93.	1893–94.	1894–95.	1895–96.	1896–97.	1897–98.	1898–99.	1899–1900.	1900–1.	1901–2.	1902–3.	1903–4.	1904–5.	1905–6.	1906–7.	1907–8.	1908–9.	1909–10.	1910–11.	1911–12.	1912–13.	
	£	£	£	£	£	£	£	£	£	£	£	£	£	£	£	£	£	£	£	£	£	£	£	£
Immigration	2,145,151	817	242	343	101	*Cr. 10*	301	70	105	385	214	139	142	*Cr. 7*	6,481	8,753	14,353	9,132	15,075	17,003	9,441	11,681	†14,694	2,254,606
Public Works Departmental	352,169	7,796	7,790	8,406	8,680	14,300	14,892	9,689	10,090	12,572	12,932	17,771	13,949	16,088	12,814	13,517	16,710	18,219	24,512	41,176	42,733	49,864	‡57,426	784,095
Development of Water-power	..	..	..	..	..	..	..	..	..	..	..	..	..	..	468	2,901	4,664	315	..	..	1,021	9,082	..	18,451
Irrigation and Water-supply*	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1,562	2,794	..	4,356
Railways	14,104,093	154,417 *Cr. 681*	220,894	176,304	247,545	197,105	207,231 *Cr. 334*	351,600	374,192	417,937	717,723	1,333,940	759,752	828,704	779,891	1,021,265	1,227,880	1,093,535	1,116,184	1,128,400	1,104,071 *Cr. 652*	1,125,905 *Cr. 6,987*	1,148,832 *Cr. 29,528*	29,799,218
Payment to Midland Railway Bondholders	..	..	..	..	..	..	..	..	..	..	..	..	..	150,000	..	..	..	..	..	..	..	..	..	150,000
Roads:—																								
Roads North of Auckland	229,674	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Main Roads	1,426,328	11,739	12,588	22,235	22,731	27,959	4,289	241,209	248,934	237,351	267,374	354,687	230,349	316,248	202,850	306,065	308,500	285,248	422,174	297,932	229,537	383,511	337,584	..
Miscellaneous Roads and Bridges		6,843	10,443	58,042	9,972	17,075	11,195																	
Roads to open up Lands	602,760	27,993	21,989		..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Grants-in-aid	788,993	10,757	7,144	8,951	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Village Settlements	36,943	3,829	4,412	2,898	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Local Bodies	315	470	..	390	..	227	207	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Roads on Goldfields	173,964	9,795	19,490	20,387	17,577	21,513	32,578	49,569	46,550	48,039	48,417	47,573	51,690	45,594	26,112	45,139	38,970	38,494	47,375	40,830	25,626	41,067	36,761	..
Miscellaneous	291,365	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
		Cr. 64,954	*Cr. 1,613*	*Cr. 1,030*	*Cr. 7,050*	*Cr. 573*	*Cr. 365*	*Cr. 365*	*Cr. 365*	*Cr. 347*														
Development of Thermal Springs and Natural Scenery	..	..	..	..	..	..	16,023	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Roads to give access to North Island Trunk Railway	47,820	30,289	29,440	34,765	17,841	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Lands Improvement Account	..	..	..	..	89,207	108,168	103,555	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Total, Roads	3,598,162	36,761	103,893	146,638	150,278	174,369	167,482	290,413	295,119	285,043	315,791	402,260	282,039	361,842	228,962	351,204	347,470	323,742	469,549	338,762	255,163	424,578	374,345	9,723,865
Development of Goldfields	561,101	2,257	3,811	5,272	5,865	9,345	10,508	33,117	17,355	21,815	15,907	15,326	24,213	16,278	6,258	18,533	11,064	8,633	32,859	18,597 *Cr. 1,000*	10,845 *Cr. 1,000*	21,244 *Cr. 30*	10,644 *Cr. 1,015*	877,802
Purchase of Native Lands	1,196,479	52,397	57,187 *Cr. 10,438*	4,320 *Cr. 2,428*	349 *Cr. 12*	..	*Cr. 37*	61,503	53,182 *Cr. 225*	32,025	28,688	18,261	15,782	5,352	6,281	13,777	9,135	2,190	2,099	30,567	2,976 *Cr. 2,286*	*Cr. 2,466*	*Cr. 917*	..
Native Lands Purchase Account	..	..	19,575	78,985	101,009	163,411	129,000	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Total, Land Purchases	1,196,479	52,397	66,324	80,877	101,346	163,411	128,963	61,503	52,957	32,025	28,688	18,261	15,782	5,352	6,281	13,777	9,135	2,190	2,099	30,567	690	*Cr. 2,466*	*Cr. 917*	2,065,721
Telegraph Extension	606,648	27,773	29,245	16,127	19,229	35,538	36,791	29,384	28,551	26,771	50,101	31,729	68,578	47,228	79,298	77,186	114,068	155,491	163,033	123,423	111,867	147,692	251,375	2,277,126
Public Buildings:—																								
General (including Miscellaneous)	193,695	454	1,588	621	2,551	3,724	8,178	14,797	8,764	3,957	5,594	12,513	9,031	10,964	9,021	2,231	14,216	16,260	39,635	41,964	44,044	†34,721	44,719	..
Parliamentary	13,962	..	..	209	6,822	..	9	466	20,636	9,883	3,039	4,424	1,503	602	697	71	1,047	4,119	5,172	3,157	237	2,004	18,806	..
Judicial	266,402	8,901	2,779	5,262	11,487	27,341	14,806	12,727	11,109	19,682	29,630	28,728	33,224	25,978	13,083	15,899	35,192	28,938	37,211	31,606	22,295	44,133	45,431	..
Post and Telegraph	143,588	1,009	6,843	3,154	3,542	6,194	7,504	5,888	5,168	13,483	20,954	40,361	74,686	53,918	16,008	38,419	43,918	43,724	62,262	68,574	117,815	130,815	122,999	..
Customs	55,177	13	5	666	12	647	16	385	..	107	875	2,066	6,630	8,719	13,018	7,903	414	47	2,507	233	..	..	..	..
Quarantine Stations	3,525	..	..	3	306	..	..	..	..	..	2,607	424	..	..	..	..	..	..	..	..	..	..	..	..
Mental Hospitals	301,739	16,914	11,887	18,957	13,633	10,935	16,404	14,130	17,667	17,712	18,872	16,743	10,167	15,812	15,949	16,235	8,049	7,987	15,296	19,839	12,707	8,809	46,181	..
Public Health	..	..	..	..	..	..	..	..	..	..	..	..	..	6,315	4,265	7,926	1,765	7,497	4,402	319	..	..	376	..
Hospitals and Charitable Institutions	33,184	..	7,999	..	..	6,561	700	..	..	899	5,141	1,200	3,540	4,291	1,204	4,786	10,259	15,576	11,153	7,259	1,484	12,745	8,750	..
School-buildings	819,514	7,500	..	15,000	15,000	20,000	22,143	23,864	43,403	49,256	33,681	38,606	57,790	87,089	42,721	69,223	109,459	100,197	102,340	98,103	124,926	‡90,535	105,000	..
Agricultural	..	..	..	160	837	1,127	819	1,328	520	447	971	535	883	2,504	1,362	2,618	2,707	1,690	5,543	6,103	1,160	3,684	‖6,475	
Workers' Dwellings	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	22,644	46,455	
Total, Public Buildings	1,780,786	34,791	31,101	44,032	54,190	76,529	70,579	73,585	107,267	115,426	121,364	145,600	197,454	216,192	117,328	165,311	227,026	226,035	285,521	277,157	324,668	350,090	445,192	5,487,224
Lighthouses, Harbour Works, and Harbour Defences:—																								
Lighthouses	119,566	..	6,642	2,612	..	234	6,067	2,180	3,727	3,333	1,017	2,060	6,082	6,206	2,167	962	..	1,417	7,481	6,762	1,470	5,428	9,031	..
Harbour Works	310,107	..	..	..	650	3,861	866	568	1,777	365	1,540	3,421	1,373	1,773	1,308	2,684	2,963	2,867	4,439	4,548	4,092	6,004	7,415	..
Harbour Defences	452,146	7,347	4,563	3,976	2,495	3,314	4,667	2,547	10,158	5,328	3,960	6,678	6,126	2,885	2,515	1,300	1,541	2,579	7,297	5,372	2,865	1,144	339	..
Total, Lighthouses, &c.	881,819	7,347	11,205	6,588	3,145	7,409	11,600	5,295	15,662	9,026	6,517	12,159	13,581	10,864	5,990	4,946	4,504	6,863	19,217	16,682	8,427	12,576	16,785	1,098,207
Rates on Native Lands	58,013	2,038	615 *Cr. 8*	415	561	340	332	156	347	744	673	571	471	666	631	548	695	837	27	..	..	..	..	68,672
Contingent Defence	429,719	..	..	..	..	5,000	10,554	10,360	13,867	42,810	37,650	146,875	37,005	38,723	46,588	35,569	14,874	18,574	10,766	4,977	6,071	10,437	23,790	944,209
Tourist and Health Resorts	..	..	..	..	..	..	..	..	..	..	..	11,260	10,949	15,643	17,508	15,888	42,271	45,048	24,286	14,507	5,912	13,361	12,906	229,539
Lands Improvement§	..	..	..	..	..	..	..	..	..	..	..	1,741	2,349	2,019	2,248	1,052	5,605	9,561	19,542	6,910	11,125	‖20,394	22,550 *Cr. 383*	104,713
Charges and Expenses of raising Loans	1,021,472	..	5,356	..	..	..	943 *Cr. 6*	5 *Cr. 5*	224	28,322	1,460	5,620 *Cr. 516*	88,180	87,249	10,764	236	*Cr. 5,175*	*Cr. 8,487*	575	17,715 *Cr. 12,000*	66,367 *Cr. 66,392*	67,470 *Cr. 66,954*	72,950 *Cr. 71,681*	1,243,692
Interest and Sinking Funds	218,500	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	218,500
Coal Exploration and Mine Development	10,835	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	10,835
Thermal Springs	14,336	264	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	14,600
Total Ways and Means Credits	..	*65,635*	*12,059*	*3,458*	*7,062*	*573*	*705*	*370*	*590*	*347*	..	*516*	..	*7*	..	..	*5,175*	*8,487*	..	..	..	*10,530*	*Cr. 103,524*	..
Grand Total—Net Expenditure	26,979,283	325,977	480,468	485,002	590,940	683,336	659,836	865,172	915,736	992,876	1,309,020	2,142,736	1,514,444	1,796,841	1,321,510	1,730,686	2,035,144	1,909,688	2,183,245	2,022,876	1,891,918	2,190,731	2,347,965	57,375,431

* Previously included under Lands Improvement. † Includes "Unauthorized," £238. ‡ Includes "Unauthorized," £139. § For previous expenditure see Roads Class. ‖ Includes "Unauthorized," £50.

N.B.—The figures in italics, prefixed by "*Cr.*," are either recoveries on account of services of previous years or receipts-in-aid applied in reduction of expenditure.
The totals from 1892–93 to 1896–97, inclusive, include expenditure under Native Lands Purchase Account; and from 1894–95 to 1896–97, inclusive, expenditure under Lands Improvement Account.

TABLE No. 3.

EXPENDITURE on Railways to 31st March, 1913, and Liabilities on that Date.

Lines of Railway.	Total Expenditure by General Government to 31st March, 1912.	Recoveries on Account of Expenditure of Previous Years.	Expenditure out of Public Works Fund during Year 1912–13.					Expenditure under Special Acts during Year 1912–13.	Amounts previously Charged to "Surveys of New Lines" now Charged to Individual Lines.	Total Expenditure by General Government to 31st March, 1913.	Valuation of Works constructed by Provinces and Midland Railway Company.*	Liabilities.	Total Expenditure and Liabilities, 31st March, 1913.	Lines of Railway
			New Works.			Works on Open Lines.	Land-claims and other Old Liabilities.							
			Construction and Surveys.	Permanent-way.	Total New Works.									
	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	
Kaihu Valley	63,578 9 9	..	8,799 19 6	2,955 0 0	11,754 19 6	193 2 7	..	..	..	75,526 11 10	..	397 16 9	75,924 8 7	Kaihu Valley.
Kawakawa to Hokianga	71,372 7 6	..	30,977 14 2	14,046 0 0	45,023 14 2	..	..	..	..	116,396 1 8	..	..	116,396 1 8	Kawakawa to Hokianga.
Kawakawa to Whangarei and Onerahi	511,198 17 10	..	2,245 13 11	..	2,245 13 11	1,946 14 2	..	..	..	515,391 5 11	..	..	515,391 5 11	Kawakawa–Whangarei & Onerahi
Helensville Northwards	552,902 8 0	..	73,935 11 6	4,127 0 0	78,062 11 6	235 17 10	..	..	..	631,200 17 4	..	6,401 1 3	637,601 18 7	Helensville Northwards.
Helensville to Te Awamutu	1,525,206 9 0	200 0 0	..	..	..	79,951 0 2	..	..	..	1,604,957 9 2	..	..	1,604,957 9 2	Helensville to Te Awamutu.
Huntly to Awaroa	7,858 1 8	..	11,731 19 1	170 0 0	11,901 19 1	..	..	..	..	19,760 0 9	..	3,646 17 1	23,406 17 10	Huntly to Awaroa.
Cambridge Branch	51,110 9 9	..	..	..	..	..	..	..	..	51,110 9 9	..	..	51,110 9 9	Cambridge Branch.
Waikato to Thames—														Waikato to Thames—
Hamilton to Te Aroha	148,131 9 7	..	..	..	..	1,524 18 3	..	..	..	149,656 7 10	..	..	149,656 7 10	Hamilton to Te Aroha.
Te Aroha to Thames	202,472 13 9	..	..	..	..	1,524 18 3	..	..	..	203,997 12 0	..	..	203,997 12 0	Te Aroha to Thames.
Paeroa to Waihi and Tauranga	146,680 16 7	..	5,362 16 3	..	5,362 16 3	..	..	..	..	152,043 12 10	..	3 0 0	152,046 12 10	Paeroa to Waihi and Tauranga.
Thames Valley to Rotorua—														Thames Valley to Rotorua—
Morrinsville to Lichfield	161,693 0 10	..	..	..	..	1,602 5 1	..	..	..	163,295 5 11	..	..	163,295 5 11	Morrinsville to Lichfield.
Putaruru to Rotorua	194,646 9 11	..	..	..	..	1,602 5 1	..	..	..	196,248 15 0	..	..	196,248 15 0	Putaruru to Rotorua.
Marton to Te Awamutu	2,694,194 8 5	253 14 9	..	..	..	9,007 7 7	..	..	..	2,702,948 1 3	..	..	2,702,948 1 3	Marton to Te Awamutu.
Raetihi to Ohakune	779 12 6	..	2,022 10 11	..	2,022 10 11	..	..	..	..	2,802 3 5	..	..	2,802 3 5	Raetihi to Ohakune.
Tauranga to Paengaroa	53,399 18 10	..	28,462 8 2	12,462 0 0	40,924 8 2	..	..	..	288 11 4	94,612 18 4	..	3 0 0	94,615 18 4	Tauranga to Paengaroa.
Gisborne to Motu	438,749 17 11	..	57,548 4 10	14,687 0 0	72,235 4 10	..	..	..	..	510,985 2 9	..	286 6 4	511,271 9 1	Gisborne to Motu.
Gisborne to Ormond Tramway	4,975 1 7	..	..	..	..	..	..	..	..	4,975 1 7	..	..	4,975 1 7	Gisborne to Ormond Tramway.
Napier to Gisborne—														Napier to Gisborne—
Gisborne Southwards	1,567 8 8	..	11,438 8 8	..	11,438 8 8	..	..	..	..	13,005 17 4	..	130 8 9	13,136 6 1	Gisborne Southwards.
Napier Northwards	294 7 5	..	15,677 5 9	..	15,677 5 9	..	..	..	..	15,971 13 2	..	5 5 0	15,976 18 2	Napier Northwards.
Wellington to Napier—														Wellington to Napier—
Napier to Woodville and Palmerston North	887,165 13 2	60 0 0	..	..	..	4,940 10 1	..	..	..	892,046 3 3	..	..	892,046 3 3	Napier to Woodville and Palmerston North.
Wellington to Woodville, including Te Aro Extension	1,588,146 6 7	†11,192 11 7	..	..	..	13,724 3 6	..	‡991 4 3	..	1,591,669 2 9	..	..	1,591,669 2 9	Wellington to Woodville, including Te Aro Extension.
Wellington to Waitara—														Wellington to Waitara—
Wellington to Longburn (including Wellington–Manawatu Railway Purchase)	958,936 8 0	..	..	..	..	5,336 8 1	..	..	..	964,272 16 1	..	..	964,272 16 1	Wellington to Longburn (including W'ton–Man'tu R'way Purchase).
Foxton to Waitara	1,534,009 5 3	4,011 6 7	4,007 4 0	..	4,007 4 0	5,113 6 1	123 0 4	..	..	1,539,241 9 1	..	..	1,539,241 9 1	Foxton to Waitara.
Mount Egmont Branch	55,183 11 4	..	4,656 13 0	1,158 0 0	5,814 13 0	..	..	..	..	60,998 4 4	..	..	60,998 4 4	Mount Egmont Branch.
Stratford to Te Koura (East End)	3,861 19 4	..	22,447 2 9	..	22,447 2 9	..	..	..	..	26,309 2 1	..	155 4 7	26,464 6 8	Stratford to Te Koura (East End).
Stratford to Te Koura (West End)	415,619 10 5	..	72,843 11 10	7,532 0 0	80,375 11 10	..	50 0 0	..	..	496,045 2 3	..	1,615 13 6	497,660 15 9	Stratford to Te Koura (West End).
Nelson to Roundell	196,738 18 6	..	..	..	..	1,177 0 3	6 18 4	..	..	197,922 17 1	..	..	197,922 17 1	Nelson to Roundell.
Midland Railway—														Midland Railway—
Belgrove to Inangahua	222,752 4 8	..	23,366 10 3	63 0 0	23,429 10 3	..	..	..	..	246,181 14 11	78,306 19 9	835 13 6	325,324 8 2	Belgrove to Inangahua.
Stillwater to Inangahua	169,551 11 3	..	10,072 19 10	3,379 0 0	13,451 19 10	155 2 7	27 12 6	..	..	183,186 6 2	543,573 17 9	..	1,206,389 8 3	Stillwater to Inangahua.
Brunnerton to Bealey	415,819 0 5	..	61,808 18 11	..	61,808 18 11	..	..	..	..	477,627 19 4		2,001 5 0		Brunnerton to Bealey.
Springfield to Bealey	654,097 12 0	..	36,785 16 2	12,665 0 0	49,450 16 2	660 3 11	..	..	..	704,208 12 1	61,579 5 7	5,813 10 11	771,601 8 7	Springfield to Bealey.
Westport to Ngakawau	188,008 17 3	..	..	..	..	..	..	..	..	188,008 17 3	..	..	188,008 17 3	Westport to Ngakawau.
Westport to Inangahua	99,091 19 3	..	18,711 7 3	*Cr.* 1,700 0 0	17,011 7 3	..	..	..	656 15 8	116,760 2 2	..	28,857 8 7	145,617 10 9	Westport to Inangahua.
Ngahere to Blackball	147,577 1 10	..	..	..	..	..	*Cr.* 40 11 5	..	..	147,536 10 5	..	..	147,536 10 5	Ngahere to Blackball.
Greymouth to Point Elizabeth	224,724 17 1	..	9,979 13 8	961 0 0	10,940 13 8	266 19 3	..	..	1 5 2	235,933 15 2	..	1,958 4 6	237,891 19 8	Greymouth to Point Elizabeth.
Greymouth to Brunnerton	150,512 11 11	..	..	..	..	..	..	..	..	150,512 11 11	..	..	150,512 11 11	Greymouth to Brunnerton.
Greymouth to Ross and Mikonui	336,799 7 4	..	..	..	..	..	73 17 10	..	..	336,873 5 2	..	..	336,873 5 2	Greymouth to Ross and Mikonui.
Picton to Waipara—														Picton to Waipara—
Picton Southwards	548,507 0 4	..	21,876 16 9	3 0 0	21,879 16 9	15,482 9 2	..	..	..	585,869 6 3	..	3,932 5 2	589,801 11 5	Picton Southwards.
Waipara Northwards	344,954 13 8	..	23,964 13 4	1,559 0 0	25,523 13 4	..	..	..	..	370,478 7 0	..	1,075 19 0	371,554 6 0	Waipara Northwards.
Culverden to Hanmer (motor-cars and repairs to roads)	3,834 0 0	..	..	..	..	..	..	..	..	3,834 0 0	..	..	3,834 0 0	Culverden to Hanmer (motor-cars and repairs to roads).
Hurunui to Waitaki—														Hurunui to Waitaki—
Main Line	1,758,646 6 1	..	..	..	..	15,079 3 11	..	..	..	1,773,725 10 0	316,135 0 0	..	2,089,860 10 0	Main Line.
Oxford Branch	51,467 7 11	..	..	..	..	..	..	..	..	51,467 7 11	..	..	51,467 7 11	Oxford Branch.
Eyreton Branch	44,276 12 10	..	..	..	..	..	..	..	..	44,276 12 10	..	..	44,276 12 10	Eyreton Branch.
Lyttelton Branch	80,907 16 7	..	..	..	..	..	..	..	..	80,907 16 7	340,500 0 0	..	421,407 16 7	Lyttelton Branch.
Southbridge Branch	89,523 18 9	..	..	..	..	..	..	..	..	89,523 18 9	..	..	89,523 18 9	Southbridge Branch.
Springfield and Whitecliffs Branches	95,336 3 10	..	..	..	..	..	..	..	..	95,336 3 10	..	..	95,336 3 10	Springfield & Whitecliffs Branches.
Fairlie Creek Branch	67,039 8 11	..	..	..	..	..	..	..	..	67,039 8 11	75,124 0 0	..	142,163 8 11	Fairlie Creek Branch.
Waimate Branch	50,158 2 10	..	..	..	..	..	..	..	..	50,158 2 10	..	..	50,158 2 10	Waimate Branch.
Ashburton Forks Branch	74,610 1 11	..	..	..	..	..	..	..	..	74,610 1 11	..	..	74,610 1 11	Ashburton Forks Branch.
Upper Ashburton Branch	61,638 18 6	..	..	..	..	..	..	..	..	61,638 18 6	..	..	61,638 18 6	Upper Ashburton Branch.
Little River Branch	108,112 15 0	..	..	..	..	..	..	..	..	108,112 15 0	..	..	108,112 15 0	Little River Branch.
Canterbury Interior Main Line—														Canterbury Interior Main Line—
Oxford to Malvern	53,649 0 4	..	..	..	..	..	..	..	..	53,649 0 4	..	..	53,649 0 4	Oxford to Malvern.
Whitecliffs to Rakaia	542 6 2	..	..	..	..	..	..	..	..	542 6 2	..	..	542 6 2	Whitecliffs to Rakaia.
Temuka to Rangitata	5,152 2 8	..	..	..	..	..	..	..	..	5,152 2 8	..	..	5,152 2 8	Temuka to Rangitata.
Waitaki to Bluff—														Waitaki to Bluff—
Main Line, including Port Chalmers Branch	3,162,616 14 1	..	..	..	..	16,475 10 2	..	§29,253 13 3	..	3,208,345 17 6	82,258 17 3	..	3,290,604 14 9	Main Line, including Port Chalmers Branch.
Duntroon Branch	96,772 15 3	..	..	..	..	325 15 8	..	..	..	97,098 10 11	37,500 0 0	..	134,598 10 11	Duntroon Branch.
Ngapara Branch	26,090 7 8	..	..	..	..	..	..	..	..	26,090 7 8	58,009 0 0	..	84,099 7 8	Ngapara Branch.
Fernhill Railway Purchase	1,415 8 10	..	..	..	..	..	..	..	..	1,415 8 10	..	..	1,415 8 10	Fernhill Railway Purchase.
Brighton Road Branch	6,473 14 9	..	..	..	..	..	..	..	..	6,473 14 9	12,829 0 0	..	19,302 14 9	Brighton Road Branch.
Outram Branch	11,951 7 6	..	..	..	..	..	..	..	..	11,951 7 6	29,691 0 0	..	41,642 7 6	Outram Branch.
Lawrence Branch	251,110 0 9	..	17,391 13 3	9 0 0	17,400 13 3	..	..	..	423 14 3	268,934 8 3	..	313 18 4	269,248 6 7	Lawrence Branch.
Livingstone Branch	82,784 18 10	..	..	..	..	..	..	..	..	82,784 18 10	..	..	82,784 18 10	Livingstone Branch.
Waihemo Branch	33,190 18 8	..	..	..	..	..	..	..	..	33,190 18 8	..	..	33,190 18 8	Waihemo Branch.
Catlin's River Branch	368,549 8 0	..	28,794 12 8	3,326 0 0	32,120 12 8	..	..	..	..	400,670 0 8	..	3,228 16 11	403,898 17 7	Catlin's River Branch.
Heriotburn Branch	123,230 17 5	..	..	..	..	..	..	..	..	123,230 17 5	..	..	123,230 17 5	Heriotburn Branch.
Waikaka Branch	67,820 16 4	..	..	..	..	..	..	..	..	67,820 16 4	..	..	67,820 16 4	Waikaka Branch.
Waimea Plains Branch	111,965 13 3	..	..	..	..	..	..	..	..	111,965 13 3	..	..	111,965 13 3	Waimea Plains Branch.
Toitois Branch	52,480 4 3	..	..	..	..	262 15 5	..	..	..	52,742 19 8	..	..	52,742 19 8	Toitois Branch.
Riversdale to Switzers	81,523 2 9	..	..	..	..	..	..	..	16 19 2	81,540 1 11	..	..	81,540 1 11	Riversdale to Switzers.
Kelso to Gore	602 2 5	..	..	..	..	..	..	..	..	602 2 5	..	..	602 2 5	Kelso to Gore.
Seaward Bush to Catlin's	183,798 9 11	..	496 2 4	..	496 2 4	..	24 15 0	..	..	184,319 7 3	..	..	184,319 7 3	Seaward Bush to Catlin's.
Otago Central	1,280,393 4 3	3 0 0	..	..	..	..	..	..	1 14 6	1,280,391 18 9	..	..	1,280,391 18 9	Otago Central.
Invercargill to Kingston—														Invercargill to Kingston—
Main Line	330,073 18 7	..	..	..	..	‖8,041 10 1	..	..	..	338,115 8 8	91,937 5 2	..	430,052 13 10	Main Line.
Mararoa Branch	27,216 18 7	..	..	..	..	..	..	..	..	27,216 18 7	..	..	27,216 18 7	Mararoa Branch.
Makarewa to Orepuki and Waiau Thornbury to Wairio	328,672 12 5	..	..	..	..	757 4 9	..	..	..	329,429 17 2	60,297 0 0	..	389,726 17 2	Makarewa to Orepuki and Waiau. Thornbury to Wairio.
Forest Hill	22,983 14 5	..	..	..	..	..	..	..	..	22,983 14 5	..	..	22,983 14 5	Forest Hill.
Expenses of Railway Commissions and other Expenditure not chargeable to Individual Lines	10,336 19 11	..	..	..	..	..	..	..	..	10,336 19 11	..	..	10,336 19 11	Expenses of Railway Commissions, &c., not chargeable to Individual Lines.
Surveys of New Lines—														Surveys of New Lines—
North Island	30,009 6 4	..	3,082 8 2	..	3,082 8 2	..	..	..	*Cr.* 288 11 4	32,803 3 2	..	3 8 3	32,806 11 5	North Island.
Middle Island	6,525 11 2	..	209 12 3	..	209 12 3	..	..	..	*Cr.* 1,100 8 9	5,634 14 8	..	..	5,634 14 8	Middle Island.
Permanent-way for Railway Department	25,000 0 0	¶25,000 0 0	..	..	..	..	..	..	..	..	..	..	..	Permanent-way for Railway Dept.
Rolling-stock	5,141,805 9 0	..	..	..	..	279,249 16 2	..	..	..	5,421,055 5 2	..	143,441 0 0	5,564,496 5 2	Rolling-stock.
Stock of Permanent-way materials, 31st March, 1912 .. .. £102,850 4 4	102,850 4 4	..	..						..	..	..	..	..	
	30,486,011 1 1													
Stock of Permanent-way decreased by £2,170 5 5	2,170 5 5	..	..	..									..	
Stock of Permanent-way materials, 31st March, 1913 .. .. £100,679 18 11	..	..	..				..	..	..	100,679 18 11	..	51,233 19 7	151,913 18 6	Stock of Permanent-way materials.
Total	30,483,840 15 8	40,720 12 11	608,698 9 2	77,402 0 0	686,100 9 2	464,636 8 1	265 12 7	30,244 17 6	..	**31,624,367 10 1	1,787,741 5 6	255,340 3 0	33,667,448 18 7	.. .. Total.

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* Also includes value for £150,000 paid to debenture-holders under the Midland Railways Petitions Settlement Act Amendment Act, 1903.

† Hutt Road and Railway Improvement Account: Includes £8,285 12s. 7d., cost of land previously charged to railway now transferred to the road.

‡ Expenditure under Hutt Road and Railway Improvement Act Account.

§ Expenditure under Railways Improvement Authorization Act Account.

‖ Includes £7,222 9s. 6d. expended on new steamer, and on wharves, Lake Wakatipu.

¶ Deposit Account with High Commissioner, London, now refunded to Public Works Fund.

** Includes amount expended on purchase of district railways, £477,487 7s. 11d.

Date.

w s.	Total Expenditure by General Government to 31st March, 1913.	Valuation of Works constructed by Provinces and Midland Railway Company.*	Liabilities.	Total Expenditure and Liabilities, 31st March, 1913.	LINES OF RAILWAY
l.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	
	75,526 11 10	..	397 16 9	75,924 8 7	Kaihu Valley.
	116,396 1 8	..	..	116,396 1 8	Kawakawa to Hokianga.
	515,391 5 11	..	..	515,391 5 11	Kawakawa–Whangarei & Onerahi
	631,200 17 4	..	6,401 1 3	637,601 18 7	Helensville Northwards.
	1,604,957 9 2	..	..	1,604,957 9 2	Helensville to Te Awamutu.
	19,760 0 9	..	3,646 17 1	23,406 17 10	Huntly to Awaroa.
	51,110 9 9	..	..	51,110 9 9	Cambridge Branch.
					Waikato to Thames—
	149,656 7 10	..	..	149,656 7 10	Hamilton to Te Aroha.
	203,997 12 0	..	..	203,997 12 0	Te Aroha to Thames.
	152,043 12 10	..	3 0 0	152,046 12 10	Paeroa to Waihi and Tauranga.
					Thames Valley to Rotorua—
	163,295 5 11	..	..	163,295 5 11	Morrinsville to Lichfield.
	196,248 15 0	..	..	196,248 15 0	Putaruru to Rotorua.
	2,702,948 1 3	..	..	2,702,948 1 3	Marton to Te Awamutu.
	2,802 3 5	..	..	2,802 3 5	Raetihi to Ohakune.
4	94,612 18 4	..	3 0 0	94,615 18 4	Tauranga to Paengaroa.
	510,985 2 9	..	286 6 4	511,271 9 1	Gisborne to Motu.
	4,975 1 7	..	..	4,975 1 7	Gisborne to Ormond Tramway.
					Napier to Gisborne—
	13,005 17 4	..	130 8 9	13,136 6 1	Gisborne Southwards.
	15,971 13 2	..	5 5 0	15,976 18 2	Napier Northwards.
					Wellington to Napier—
	892,046 3 3	..	..	892,046 3 3	Napier to Woodville and Palmerston North.
	1,591,669 2 9	..	..	1,591,669 2 9	Wellington to Woodville, including Te Aro Extension.
					Wellington to Waitara—
	964,272 16 1	..	..	964,272 16 1	Wellington to Longburn (including W'ton–Man'tu R'way Purchase).
	1,539,241 9 1	..	..	1,539,241 9 1	Foxton to Waitara.
	60,998 4 4	..	..	60,998 4 4	Mount Egmont Branch.
	26,309 2 1	..	155 4 7	26,464 6 8	Stratford to Te Koura (East End).
	496,045 2 3	..	1,615 13 6	497,660 15 9	Stratford to Te Koura (West End).
	197,922 17 1	..	..	197,922 17 1	Nelson to Roundell.
					Midland Railway—
	246,181 14 11	78,306 19 9	835 13 6	325,324 8 2	Belgrove to Inangahua.
	183,186 6 2	543,573 17 9	..	1,206,389 8 3	Stillwater to Inangahua.
	477,627 19 4		2,001 5 0		Brunnerton to Bealey.
	704,208 12 1	61,579 5 7	5,813 10 11	771,601 8 7	Springfield to Bealey.
	188,008 17 3	..	..	188,008 17 3	Westport to Ngakawau.
8	116,760 2 2	..	28,857 8 7	145,617 10 9	Westport to Inangahua.
	147,536 10 5	..	..	147,536 10 5	Ngahere to Blackball.
2	235,933 15 2	..	1,958 4 6	237,891 19 8	Greymouth to Point Elizabeth.
	150,512 11 11	..	..	150,512 11 11	Greymouth to Brunnerton.
	336,873 5 2	..	..	336,873 5 2	Greymouth to Ross and Mikonui.
					Picton to Waipara—
	585,869 6 3	..	3,932 5 2	589,801 11 5	Picton Southwards.
	370,478 7 0	..	1,075 19 0	371,554 6 0	Waipara Northwards.
	3,834 0 0	..	..	3,834 0 0	Culverden to Hanmer (motor-cars and repairs to roads).
					Hurunui to Waitaki—
	1,773,725 10 0	316,135 0 0	..	2,089,860 10 0	Main Line.
	51,467 7 11	..	..	51,467 7 11	Oxford Branch.
	44,276 12 10	..	..	44,276 12 10	Eyreton Branch.
	80,907 16 7	340,500 0 0	..	421,407 16 7	Lyttelton Branch.
	89,523 18 9	..	..	89,523 18 9	Southbridge Branch.
	95,336 3 10	..	..	95,336 3 10	Springfield & Whitecliffs Branches.
	67,039 8 11	75,124 0 0	..	142,163 8 11	Fairlie Creek Branch.
	50,158 2 10	..	..	50,158 2 10	Waimate Branch.
	74,610 1 11	..	..	74,610 1 11	Ashburton Forks Branch.
	61,638 18 6	..	..	61,638 18 6	Upper Ashburton Branch.
	108,112 15 0	..	..	108,112 15 0	Little River Branch.
					Canterbury Interior Main Line—
	53,649 0 4	..	..	53,649 0 4	Oxford to Malvern.
	542 6 2	..	..	542 6 2	Whitecliffs to Rakaia.
	5,152 2 8	..	..	5,152 2 8	Temuka to Rangitata.
					Waitaki to Bluff—
	3,208,345 17 6	82,258 17 3	..	3,290,604 14 9	Main Line, including Port Chalmers Branch.
	97,098 10 11	37,500 0 0	..	134,598 10 11	Duntroon Branch.
	26,090 7 8	58,009 0 0	..	84,099 7 8	Ngapara Branch.
	1,415 8 10	..	..	1,415 8 10	Fernhill Railway Purchase.
	6,473 14 9	12,829 0 0	..	19,302 14 9	Brighton Road Branch.
	11,951 7 6	29,691 0 0	..	41,642 7 6	Outram Branch.
3	268,934 8 3	..	313 18 4	269,248 6 7	Lawrence Branch.
	82,784 18 10	..	..	82,784 18 10	Livingstone Branch.
	33,190 18 8	..	..	33,190 18 8	Waihemo Branch.
	400,670 0 8	..	3,228 16 11	403,898 17 7	Catlin's River Branch.
	123,230 17 5	..	..	123,230 17 5	Heriotburn Branch.
	67,820 16 4	..	..	67,820 16 4	Waikaka Branch.
	111,965 13 3	[illegible]	[illegible]	[illegible]	[illegible]

TABLE No. 4.

STATEMENT showing the NET EXPENDITURE on ROADS, BRIDGES, &c., out of the Public Works Fund, Consolidated Fund, and the New Zealand State-guaranteed Advances Act, 1911, for the Year ended 31st March, 1913.

Vote No.	Item No.	Name of Work.	County.	Electorate.	Net Expenditure.		
					£	s.	d.
		PUBLIC WORKS FUND.					
		ROADS, ETC.					
		WHANGAREI ROAD DISTRICT—					
109	1	Ahipara to Herekino (£1 for £1)	Mangonui	Bay of Islands	125	10	8
	3	Awanui to Waipapakauri	,,	,,	107	5	0
	5	Broadwood to Motukaraka	Hokianga	,,	7	4	0
	6	Chamberlain Road	Mangonui	,,	94	13	0
	8	Derrick Road	Hokianga	,,	35	9	5
	9	Duncan Road	Mangonui	,,	84	8	0
	10	Fairburn Road	,,	,,	43	3	6
	12	Herekino Post-office to Factory (£1 for £1)	Hokianga	,,	4	18	0
	13	Herekino Settlement Roads (£1 for £1)	Mangonui and Hokianga	,,	9	3	7
	15	Hikurangi to Mangakura	Whangarei	,,	50	0	0
	17	Hodge's Bridge	Mangonui	,,	247	11	10
	18	Hokianga County flood damage (£1 for £1)	Hokianga	,,	100	0	0
	19	Huehue (£1 for £1)	,,	,,	0	5	0
	21	Iwitaua to Mangamuka	Mangonui, Whangaroa, and Hokianga	,,	176	8	3
	23	Jordan to Otakairangi (£50, £1 for £1)	Whangarei	,,	86	13	0
	27	Kaeo to Puerua	Bay of Islands	,,	49	19	0
	28	Kaeo to Towai	Whangaroa	,,	14	9	4
	29	Kaeo Village	,,	,,	50	0	0
	31	Kaeo to Whangaroa (£1 for £1)	,,	,,	74	12	6
	32	Kaikohe to Kawakawa, via Ngapipito (£1 for £1)	Bay of Islands	,,	1	2	6
	33	Kaikohe to Mangakahia Church	Hokianga and Bay of Islands	,,	774	13	2
	36	Kaimamaku to Helena Bay	Whangarei	,,	94	16	0
	38	Kaitaia to Ahipara	Mangonui	,,	40	0	0
	39	Kataia Road (factory to church), (£1 for £1)	,,	,,	50	0	0
	41	Kawakawa Hospital Road	Bay of Islands	,,	67	10	0
	43	Kenana	Mangonui	,,	47	8	0
	44	Kereponia (£50, £1 for £1)	,,	,,	44	0	0
	46	Kiripaka to Ngunguru, via Kaitaia (£1 for £1)	Whangarei	,,	100	0	0
	48	Kohukohu to Motukaraka, via Runa Valley	Hokianga	,,	24	1	6
	49	Kohukohu Township Roads (£1 for £2)	,,	,,	100	3	4
	50	Larner Road (Kaitaia), (£50, £1 for £1)	Mangonui	,,	56	2	6
	51	Mamari Village to Pukemiro	Hokianga	,,	18	9	0
	53	Mangakahia Bridge to junction of rivers (£1 for £1)	Whangarei	,,	45	0	0
	54	Mangakahia Stream Bridge (£1 for £1)	Hokianga	,,	37	10	4
	56	Mangatete Bridge	Mangonui	,,	149	14	6
	57	Mangatoetoe (£50, £1 for £1)	,,	,,	56	0	0
	58	Mangapoke Bridge (£1 for £1)	Bay of Islands	,,	44	19	5
	60	Mangonui to Cable-station	Mangonui	,,	39	6	6
	61	Mangonui County flood damage (£1 for £1)	,,	,,	62	2	0
	66	Matapouri	Whangarei	,,	50	0	0
	71	Motukaraka Creamery Road (£50, £1 for £1)	Hokianga	,,	15	8	9
	72	Ngaire Bridge	Mangonui	,,	74	19	4
	73	Ngaruawahine	Bay of Islands	,,	108	0	0
	78	Okaihau to Horeke (£1 for £1)	Hokianga and Bay of Islands	,,	0	8	0
	79	Okaihau to Kerikeri	Bay of Islands	,,	13	13	8
	80	Okaihau No. 2 Block Road	,,	,,	50	0	0
	81	Okaihau Settlement Road	,,	,,	50	0	0
	82	Okaihau to Waihou (£75, £1 for £1)	,,	,,	28	[illegible]	0
	83	Omanaia River Bridge	Hokianga	,,	512	12	3
	84	Opanaki to Hokianga (£1 for £1)	Hokianga and Hobson	,,	1	0	0
	85	Opouteke Block (access road)	Hokianga	,,	86	18	4
	88	Opuawhanga to Helena Bay	Whangarei	,,	100	0	0
	91	Oropo (£1 for £1)	Bay of Islands	,,	70	9	4
	93	Oruru to Kohumaru (£1 for £1)	Mangonui	,,	38	12	6
	97	Otonga to Opuawhanga (£1 for £1)	Whangarei	,,	25	0	0
	98	Oue to Landing	Hokianga	,,	100	0	0
	102	Paiaka to Hukerenui	Bay of Islands	,,	50	0	0
	104	Peria to Victoria Valley Post-office (£100, £1 for £1)	Mangonui	,,	172	4	8
	107	Puata Creek Bridge and approaches	Hokianga	,,	200	0	0
	108	Punakitere Bridge	,,	,,	124	15	5
	110	Ramarama (Lower), (£50, £1 for £1)	Bay of Islands	,,	50	0	0
	111	Rangiahua to Umawhero (£50, £1 for £1)	Hokianga	,,	96	14	0
	112	Rawene Hospital Road	,,	,,	300	0	0
	113	Ruapekapeka Parish, Section 95, &c.	Bay of Islands	,,	50	0	0
	115	Russell to Waikare	,,	,,	50	0	0
	117	Stony Creek to Kaeo	Whangaroa	,,	79	16	0
	118	Stony Creek to Mangonui	Mangonui	,,	31	10	6
	120	Taita (£1 for £1)	Hokianga	,,	1	4	6
	121	Takahue Village to Victoria Valley Road (£1 for £1)	Mangonui	,,	64	10	6

TABLE No. 4—*continued.*

STATEMENT showing the NET EXPENDITURE on ROADS, &c.—*continued.*

Vote No.	Item No.	Name of Work.	County.	Electorate	Net Expenditure.		
		ROADS, ETC.—*continued.*					
		WHANGAREI ROAD DISTRICT—*continued.*			£	s.	d.
109	123	Te Teko to Kauaeranga	Whangarei	Bay of Islands	6	15	5
	124	Towai Hill	Whangaroa	..	50	0	0
	125	Towai to Kawakawa (£50, £1 for £1)	Bay of Islands	..	84	10	0
	127	Towai to Ruapekapeka	,,	..	24	0	0
	128	Umawhero to Mangamuka (£50, £1 for £1)	Hokianga	..	50	0	0
	129	Utakura to Okaka	..	..	50	0	0
	130	Utakura River Bridge	,,	..	350	0	0
	131	Victoria Valley Post-office to Fairburn (£1 for £1)	Mangonui	..	39	12	0
	132	Waiharakeke Stream Bridge	Bay of Islands	..	90	6	2
	133	Waiharara Stream Bridge	Mangonui	..	75	0	0
	135	Waikare to Kawakawa	Bay of Islands	..	22	10	0
	137	Waimamaku to Pakanae	Hokianga	..	100	8	9
	138	Waimamaku Settlement	..	..	303	8	0
	140	Waimatanui to Tarawhati	,,	..	34	11	3
	141	Wainui Bridge	Mangonui	..	147	7	3
	143	Waiotemarama (£1 for £1)	Hokianga	..	0	6	9
	144	Waiotewhata	..	..	99	13	1
	145	Waiotu to Hukerenui (Galbraith's), (£50, £1 for £1)	Bay of Islands and Whangarei	..	50	0	0
	147	Waipapakauri to Waiharara	Mangonui	..	50	0	0
	148	Waipapakauri to West Coast	,,	..	49	8	6
	150	Waitangi Stream Bridge	Bay of Islands	..	164	13	3
	151	Whakapara to Rotokakahi (£100, £1 for £1)	Hokianga	..	28	17	0
	153	Whakapara southwards (metalling), (£1 for £1)	Whangarei	..	100	0	0
	154	Whananaki Coast Road	,,	..	100	0	0
	155	Whangae Settlement Road	Bay of Islands	..	50	0	0
	157	Whangaroa Coast Road	Whangaroa	..	150	0	0
	161	White's Bridge (Herekino), (£1 for £1)	Hokianga and Mangonui	..	77	9	10
	165	Carter Road	Whangarei	Marsden	40	0	0
	168	Grahamtown Railway-station to Taumaterau	..	..	100	0	0
	174	Mangapai to Whangarei (£1 for £1)	..	..	57	10	0
	178	McLaughlin's to Caves	..	..	72	0	0
	180	Otaika to Maungakaramea (£1 for £1)	..	..	797	17	8
	181	Otaika Valley (£1 for £1)	..	..	75	0	0
	182	Parua to Taheke	..	..	100	0	0
	185	Ruakaka Valley (£50, £1 for £1)	..	..	45	15	8
	189	Waikiekie to Mareretu (road and bridge)	,,	,,	279	9	9
	191	Waipu Caves to Mangapai	,,	..	50	0	0
	194	Waipu Gorge to Section 1, Block X, Waipu S.D.	..	..	1	10	0
	198	Whangarei County flood damage (£1 for £1)	..	..	57	0	0
	200	Whangarei to Whangarei Heads (£100, £1 for £1)	..	,,	65	0	0
	204	Kaihu to Tarawhati	Hokianga and Hobson	Kaipara	192	15	9
	205	Mangakahia Bridge to Houtu (£50, £1 for £1)	Whangarei	..	40	7	4
	206	Mangakahia Bridge to Mangakahia Church (£700, £1 for £1)	..	..	290	11	0
	207	Mangatu Stream Bridge	Hokianga	..	64	6	9
	210	Waima to Opouteke	..	..	302	9	10
	213	Waima River Bridge	..	..	455	19	5
	214	Waiote–Kumarau (£150, £1 for £1)	..	..	39	6	2
	216	Survey, acquisition, and legalization of roads, drains, gravel-pits, tramways, &c.	..	..	318	1	3
	217	Supervision	..	..	751	18	2
	218	Contingencies, including unforeseen expenditure incidental to the other items of the vote	..	..	*Cr.* 28	15	3
	219	Miscellaneous works and services, including assistance towards the construction of roads, bridges, tracks, &c.	..	..	*Cr.* 125	0	11
		Total—Whangarei	..	..	12,202	18	5
		AUCKLAND ROAD DISTRICT—					
	221	Big Omaha to Pakiri, via Leigh (£350, £1 for £1) (on account of £2,000)	Rodney	Marsden	50	0	0
	222	Boulder Stream Bridge	..	..	100	0	0
	223	Cames Bridge (£1 for £1)	..	..	50	0	0
	225	Dibble's Bridge to Whangaripo Creamery	..	,,	40	0	0
	226	Hakarau River Bridge (£1 for £1)	Otamatea	..	75	0	0
	229	Kaiwaka to Mangawai (£70, £1 for £1)	..	..	29	9	3
	230	Little Scotland to Railway-station	Rodney	..	100	0	0
	231	Mangawai to Te Hana Railway-station	..	..	50	0	0
	232	Mangawai to Waipu (coast road), (£50, £1 for £1)	Otamatea	..	102	2	0
	233	Matakana to Whangaripo	Rodney	,,	50	0	0
	234	Maungaturoto to Kaiwaka (£50, £1 for £1)	Otamatea	,,	100	0	0

TABLE No. 4—*continued.*

STATEMENT showing the NET EXPENDITURE on ROADS, &c.—*continued.*

Vote No.	Item No.	Name of Work.	County.	Electorate.	Net Expenditure.		
		ROADS, ETC.—*continued.*					
		AUCKLAND ROAD DISTRICT—*continued.*			£	s.	d.
109	237	Maungaturoto Wharf Road	Otamatea	Marsden	62	14	0
	239	Omaha to Matakana (through Sections 34 and 35)	Rodney	..	100	0	0
	243	Puhoi to Glynn Dairy Factory (£2 for £1)	..	..	100	0	0
	246	Streamlands to Kaipara Flats Road (£2 for £1)	..	..	60	0	0
	250	Te Hana to Mangawai (£1 for £1)	,,	..	450	0	0
	251	Turner's Bridges (£1 for £1)	,,	..	100	0	0
	252	Turnwald Road (£1 for £1)	,,	..	50	0	0
	255	Waipu Gorge Bridge	Whangarei and Otamatea	..	128	5	10
	256	Waipu to Mareretu (Otamatea County Section)	Otamatea	..	6	2	8
	262	Warkworth to Matakana	Rodney	..	250	0	0
	265	Whangaripo to Wellsford (£400, £1 for £1), (on account of £1,500)	..	..	77	10	0
	267	Angel's to Creamery	Otamatea	Kaipara	27	13	10
	268	Aoroa to Aratapu Drainage	Hobson	,,	100	0	0
	269	Arapohue to Hoanga	..	..	100	0	0
	270	Arapohue to Mangonui Bridge (Lower)	..	..	300	0	0
	271	Arapohue Settlement Road, via Education Reserve (£1 for £1)	..	..	73	0	0
	275	Aratapu Ferry Road to Hospital	..	..	100	0	0
	278	Awaroa to Te Kowhai	Otamatea	..	50	0	0
	280	Batley Road	..	..	29	18	6
	281	Batley Wharf to Bickerstaffe	,,	..	99	19	0
	287	Dargaville to Opanake Special Settlement (£2 for £1)	Hobson	..	300	0	0
	291	Great North Road flood-damage (Rodney County)	Rodney	..	100	0	0
	293	Hefford's Bridge (£1 for £1)	,,	..	75	0	0
	294	Helensville end of Auckland Road	Waitemata	..	43	15	0
	296	Helensville to Kaukapakapa (Inland Road)	..	..	150	0	0
	298	Helensville to Port Albert (Waitemata County Section)	..	..	200	0	0
	299	Helensville Swing-bridge (£1 for £1)	,,	..	125	0	0
	303	Hoyle Road to Lusk Road, via The Neck	Hobson	..	75	0	0
	304	Hukatere (access road)	Otamatea	..	64	4	4
	307	Kaihu to Waima	Hobson	..	100	0	0
	308	Kai Iwi to Kaihu	..	..	150	0	0
	309	Kaipara Flats to Tauhoa Railway-station	Rodney	..	60	0	0
	311	Kaiwaka to Railway-station	Otamatea	..	127	0	0
	312	Kakanui Bridge (£1 for £1)	Rodney	..	50	0	0
	313	Kirikopini to Mangakahia (£1 for £1)	Hobson	..	156	8	0
	314	Kumeu Cemetery Road	Waitemata	..	100	0	0
	316	Lusk Road (£50, £1 for £1)	Hobson	..	30	0	0
	318	Makarau to Komokoriki	Waitemata and Rodney	..	114	19	0
	319	Makarau Railway-station to Kaukapakapa	Waitemata	..	100	12	8
	320	Makarau Railway-station to Tahekeroa	..	..	144	8	11
	321	Makarau Railway-station to Wainui	..	..	99	19	3
	324	Mangakura to Hoteo Railway-station	Rodney	..	57	10	0
	325	Mangonui Bridge (Lower) to Hokowaiti (£100, £1 for £1)	Hobson	..	37	10	6
	327	Maropiu to Kairara (£100, £1 for £1)	..	..	100	0	0
	328	Matakohe District Roads	Otamatea	..	55	6	0
	329	Matakohe to Mangonui	..	..	120	0	0
	335	Maungaru S.D., Block VII, Section 5	Hobson	..	100	0	0
	342	Mount Wesley to Kaihu (£300, £1 for £1)	,,	..	107	11	6
	343	Naumai to Bradley's Corner	Otamatea	..	50	0	0
	345	Ohirangi to Helensville (£1 for £1)	Waitemata	..	50	0	0
	346	Okahu Creek Bridge	Hobson	..	101	6	4
	347	Omano to Mangarata (£1 for £1)	..	..	51	16	8
	348	Omano to Maraekura	,,	..	54	2	0
	355	Pahi to Paparoa	Otamatea	..	200	0	0
	356	Paparoa (Sterling's Road Deviation)	..	..	100	0	0
	360	Paparoa to Waikiekie (Otamatea County Section), (£1 for £1)	..	..	51	17	8
	361	Paradise Road	Hobson	..	150	0	0
	362	Paton's Hill (£1 for £1)	..	..	100	0	0
	363	Pekapekarau State Forest Reserve Road (£1 for £1)	..	..	100	0	0
	365	Port Albert to Wellsford Station (£1 for £1)	Rodney	..	402	12	0
	366	Poyner's to Omaru	Otamatea	..	50	0	0
	370	Redhill to Poutu, via West Coast	Hobson	..	199	18	11
	372	Robertson Road (£1 for £1)	Otamatea	..	50	0	0
	373	Ruatawhiri Road	Waitemata	..	150	0	0
	376	South Head Road and Deviation	..	..	150	0	0
	378	Tangaihi to Tangitiki	Hobson	..	100	0	0
	379	Tangaihi to Tikinui	,,	..	100	0	0
	380	Tangowahine Post-office Bridge	..	..	150	0	0

TABLE No. 4 *continued.*

STATEMENT showing the NET EXPENDITURE on ROADS, &c.—*continued.*

Vote No.	Item No.	Name of Work.	County.	Electorate.	Net Expenditure.		
		ROADS, ETC.—*continued.*					
		AUCKLAND ROAD DISTRICT—*continued.*			£	s.	d.
109	382	Tangowahine to Mangakahia (£1 for £1)	Hobson	Kaipara	50	0	0
	384	Tatarariki Swamp Road	,,	,,	200	0	0
	388	Te Hana Railway-station Road	Rodney	,,	103	5	6
	389	Te Kopuru to Creamery (£1 for £1)	Hobson	,,	100	0	0
	391	Te Pahi to Hoteo Railway-station	Rodney	,,	150	0	0
	392	Tokatoka to Mangonui Bridge (Upper)	Otamatea and Hobson	,,	119	12	5
	395	Tokatoka to Matakohe (Matakohe end)	Otamatea	,,	25	14	10
	398	Waimauku to Waikoukou (£162, £2 for £1)	Waitemata	,,	38	0	0
	400	Wairoa River Ferry (Mapuna), (£1 for £1)	Hobson	,,	50	0	0
	406	Whittaker's Hill (£1 for £1)	,,	,,	100	0	0
	407	Woodhill to Wharepapa Railway-station	Waitemata	,,	100	0	0
	408	Albany to Cut Hill (£100, £1 for £1)	,,	Waitemata	150	0	0
	415	Greenhithe to Cut Hill	,,	,,	200	0	0
	417	Hobsonville to Weissers and Brigham's Creek (£1 for £1)	,,	,,	100	0	0
	419	Kaukapakapa to Nanahu Post-office	,,	,,	1	7	6
	421	Riverhead Bridge approaches (£1 for £1)	,,	,,	100	0	0
	422	Rosedale Wharf Road	,,	,,	75	0	0
	423	Takapuna to Redvale (£50, £1 for £1)	,,	,,	67	10	0
	424	Wade Bridge (£1 for £1)	,,	,,	400	0	0
	426	Wade to Kahikatea Flat	,,	,,	50	0	0
	428	Wade Village to Upper Orewa (£100, £1 for £1)	,,	,,	100	0	0
	429	Wainui to Kaukapakapa Railway-station	,,	,,	100	0	0
	432	Waiwera to Wainui	,,	,,	100	0	0
	436	Carter Road	,,	Eden	100	0	0
	437	Gladstone Road	Eden	,,	66	0	0
	438	Henderson Pound Bridge and approaches (£1 for £1)	Waitemata	,,	350	0	0
	441	Hetana Hamlet Roads (£50, £1 for £1)	,,	,,	100	0	0
	442	New Lynn to Henderson	,,	,,	100	0	0
	444	Point Chevalier Road	Eden	,,	150	0	0
	448	Titirangi School Road (£50, £1 for £1)	Waitemata	,,	50	0	0
	451	Waikumete to West Coast	,,	,,	54	12	3
	452	Wairere Road (£1 for £1)	,,	,,	100	0	0
	453	Waitakerei to West Coast	,,	,,	50	0	0
	454	Whau, Portage Road (£1 for £1)	,,	,,	100	0	0
	457	Akaaka to Pukekohe, through Shepherds	Franklin	Franklin	100	0	0
	459	Ardmore Range Road	Manukau	,,	34	0	0
	461	Awhitu Wharf to Awhitu Central (£1 for £1)	Franklin	,,	12	0	0
	462	Awhitu Wharf Road to Morrison's, via Orua Bay (£1 for £1)	,,	,,	18	19	0
	471	Dow Road	Manukau	,,	164	19	0
	472	Eastern Drain Extension to Waikato River (£250, £1 for £2)	Franklin	,,	208	0	0
	473	Flat Bush School Road	,,	,,	25	0	0
	475	Great South Road (Papakura Road District), (£1 for £1)	Manukau	,,	38	0	5
	481	Kawakawa Bay to Hauarahi Stream	Franklin	,,	110	11	11
	484	Manurewa to Weymouth (£1 for £1)	Manukau	,,	33	0	6
	485	Maraetai to Clevedon (£200, £1 for £1)	,,	,,	121	3	9
	492	Otau Parish (Sections 6 and 94)	Franklin	,,	31	6	5
	498	Patumahoe Township Roads (£1 for £1)	,,	,,	95	7	4
	500	Patumahoe to Waiuku–Drury Road	,,	,,	150	0	0
	501	Piggott Road	,,	,,	34	7	2
	512	Tramway Road (Puni), (£1 for £1)	,,	,,	50	0	0
	513	Turangaruru to Waipipi Main Road (£1 for £2), (on account of £1,500)	,,	,,	488	4	11
	515	Waikopu Bridge	Manukau	,,	184	0	0
	517	Wairoa Butter-factory to Brookby Creamery	,,	,,	69	0	0
	518	Warioa Road District Bridges	Franklin	,,	755	15	10
	519	Waiuku to Awhitu	,,	,,	2	12	9
	521	Waiuku to Pukekohe (Tramway Road)	,,	,,	59	15	0
	522	Whitford Road (£1 for £1)	,,	,,	43	7	8
	523	Woodhouse Hill to Waiuku–Drury Road	,,	,,	61	7	1
	525	Coromandel County flood damage	Coromandel	Thames	350	0	0
	527	Coromandel to Mercury Bay	,,	,,	193	15	0
	535	Kopuku Stream Bridge and approaches	Waikato	,,	15	10	5
	538	Mangapiko Valley (£45, £1 for £1)	,,	,,	17	17	10
	544	Matahura Valley to Proctor's (£900, £1 for £1)	,,	,,	207	9	9
	545	Matatoke Road and Drain	Thames	,,	100	0	0
	550	Ohinewai Railway-station to Ngarua Block (£1 for £1), (on account of £1,650)	Waikato	,,	165	1	0
	552	Opani to Turua	Thames	,,	86	13	0
	554	Owaikanae Settlement Road	Coromandel	,,	36	11	6
	556	Pipi Creek Bridge and approaches	Thames	,,	50	4	3
	563	Tahuna to Waikaka	Ohinemuri	,,	140	0	0
	565	Taniwha to Wairangi Railway-station	Waikato	,,	100	0	0
	572	Waikaka Stream Road	Ohinemuri	,,	135	0	0
	576	Wairangi Railway-station to Matahura River (£1 for £1), (on account of £2,650)	Waikato	,,	492	7	9

TABLE No. 4—*continued.*

STATEMENT showing the NET EXPENDITURE on ROADS, &c.—*continued.*

Vote No.	Item No.	Name of Work.	County.	Electorate.	Net Expenditure.		
		ROADS, ETC.—*continued.*					
		AUCKLAND ROAD DISTRICT—*continued.*			£	s.	d.
109	577	Waitakaruru Stream Road	Thames	Thames	117	7	11
	580	Wharepoha District Roads (£50, £1 for £1)	,,	,,	50	0	0
	581	Whitianga to Kaimarama	Coromandel	,,	150	0	0
	582	Whitianga to Ohuka Creek	,,	,,	100	0	0
	585	Fisher Road (Tahainui), (£1 for £1)	Ohinemuri	Ohinemuri	100	0	0
	586	Gould Road (£1 for £1)	Piako	,,	110	0	0
	589	Komata Station to Waihou River	Ohinemuri	,,	80	0	0
	591	Mangaiti to Te Aroha Deviation (£1 for £1)	,,	,,	156	0	0
	593	Netherton to Awaiti Block	,,	,,	107	0	0
	594	Netherton to Kerepehi	,,	,,	137	6	8
	600	Ohinemuri County flood damage (£1 for £1)	,,	,,	35	0	0
	602	Puke Outfall Drain	,,	,,	98	0	0
	603	Tahuna to Paeroa	,,	,,	220	0	0
	604	Te Rohia to Mangaiti	,,	,,	334	19	1
	605	Te Kawana-Ngutumanga (£1 for £1)	Piako	,,	41	0	0
	607	Waitoa Block to Waihou Railway-station (£150, £1 for £1)	Ohinemuri and Piako	,,	169	0	0
	608	Awaroa Landing Road (£1 for £1)	Raglan	Raglan	342	16	6
	610	Bregmen's Landing to Churchill East	,,	,,	50	0	0
	612	Eureka Main Road to Railway-station	Waikato	,,	150	0	0
	613	Ferris Road	,,	,,	350	0	0
	614	Glen Murray to Rangiriri (£1 for £1)	Raglan	,,	59	19	4
	615	Glen Murray to Woodleigh (£1 for £1)	,,	,,	531	14	3
	617	Gordonton to Motumaoho (£1 for £1)	Waikato	,,	81	0	0
	619	Great South Road (Huntly Town District), (£1 for £2)	,,	,,	566	15	6
	620	Great South Road (Taupiri to Ngaruawahia), (£1 for £1)	,,	,,	169	15	0
	621	Heddon Road	Raglan	,,	180	9	5
	622	Horokowau Bridges	,,	,,	11	8	9
	623	Horotui to Tekowhai	Waipa	,,	100	0	0
	624	Huntly to Kahuruhuru	Raglan	,,	97	19	5
	627	Kaipo Flat (Onewhero), (£1 for £1)	,,	,,	17	17	0
	628	Kelsey's to Port Waikato	,,	,,	125	0	0
	630	Mangaokahu (£125, £1 for £1)	,,	,,	126	1	5
	633	Maungatawhiri Stream to Maungatangi Stream (£1 for £1)	Franklin	,,	34	6	1
	634	McGuire Road (£1 for £1)	Raglan	,,	64	16	8
	635	McKinnon Road	,,	,,	83	17	0
	637	Murray River Bank Road (£1 for £1)	,,	,,	330	18	5
	638	Ngaruawahia to Huntly West	,,	,,	100	0	0
	639	Ohote Creek Bridge (£1 for £1)	Waipa	,,	72	17	6
	640	Onewhero	Raglan	,,	397	5	0
	642	Opotoru Road (Hill's)	,,	,,	50	0	0
	643	Otoroheao Trig. Road	,,	,,	16	19	3
	645	Proctor Road (Taupiri)	Waikato	,,	250	0	0
	646	Pukekawa (£1 for £1)	Raglan	,,	725	2	4
	647	Punga Punga Creek Road	,,	,,	50	0	0
	648	Puriri to Huntly (£1 for £1)	,,	,,	100	0	6
	649	Raglan to Waipa (£125, £1 for £1)	,,	,,	202	1	2
	651	Rutherford Road	,,	,,	45	6	4
	652	Sprowl's Hill (£1 for £1)	Franklin	,,	50	0	0
	655	Te Akau Block to Dunmore (£1 for £1)	Raglan	,,	166	18	6
	657	Te Kirikiri (£1 for £1)	,,	,,	50	3	0
	658	Te Puroa (£200, £1 for £1)	,,	,,	180	14	1
	659	Te Puroa to Waingaro – Ngaruawahia Road (£1 for £1)	,,	,,	111	4	5
	660	Three Streams to Kauroa Butter-factory	,,	,,	131	14	8
	661	Tikotiko	,,	,,	30	0	0
	662	Tuakau Bridge to Raglan (£1 for £1), (on account of £1,500)	,,	,,	324	19	1
	663	Tuakau to Pukekohe (£1 for £1)	Franklin	,,	100	0	0
	664	Tuakau Railway-station to Tuakau Bridge (£1 for £1)	,,	,,	50	0	0
	665	Tunaki	Raglan	,,	55	12	4
	668	Waingaro Springs to Te Uku	,,	,,	35	12	0
	669	Waingaro to Ngaruawahia (£100, £1 for £1)	,,	,,	50	0	0
	670	Waingaro to Waingaro Landing	,,	,,	124	14	5
	671	Wainui	,,	,,	48	19	0
	672	Waitetuna to Kauri	,,	,,	106	12	6
	673	Waitetuna to Whatawhata (£250, £1 for £1)	,,	,,	535	10	8
	674	Wairamarama Block Roads (£1 for £1, (on account of £3,000)	,,	,,	533	9	0
	675	Whaanga	,,	,,	117	8	3
	677	Whatawhata Swamp Road (£1 for £1)	Waipa	,,	300	0	0
	680	Alexandra Road (£50, £1 for £1)	Piako	Tauranga	49	19	2
	685	Diagonal Road (£1 for £1)	,,	,,	37	17	9

TABLE No. 4—*continued.*

STATEMENT showing the NET EXPENDITURE on ROADS, &c.—*continued.*

Vote No.	Item No.	Name of Work.	County.	Electorate.	Net Expenditure. £	s.	d.
		ROADS, ETC.—*continued.*					
		AUCKLAND ROAD DISTRICT—*continued.*			£	s.	d.
109	687	Mangawhero to Kaimai (£100, £1 for £1)	Matamata	Tauranga	100	0	0
	689	Motumaoho Railway-station to Tauhei Road (£500, £1 for £1)	Piako	,,	500	0	0
	691	Tauhei to Morrinsville (£1 for £1)	,,	,,	180	10	0
	695	Waihou River Bridges (Mangawhero)	,,	,,	140	16	8
	697	Waiomou Stream Bridge	Matamata	,,	240	0	0
	698	Crow's Nest Hill to No. 4, Maungatautari (£1 for £1)	Waipa and Matamata	Waikato	350	0	0
	699	Hamilton to Tuhikaramea	Waipa	,,	200	0	0
	700	Harapepe to Karamu	Raglan	,,	878	17	9
	701	Kakepuku Improved-farm Settlement	Waitomo and West Taupo	,,	135	19	10
	702	Kakepuku	Ditto	,,	66	1	3
	703	Kakepuku to Puniu Bridge	West Taupo	,,	134	1	10
	704	Kaniwhaniwha Bridge (repairs)	Raglan	,,	87	7	0
	705	Kihikihi to Otorohanga (£1 for £1)	Waipa, West Taupo, and Waitomo	,,	500	0	0
	706	Kihikihi to Waotu	West Taupo and Waipa	,,	321	11	0
	707	Lake Road (£1 for £1)	Waipa	,,	120	0	0
	709	Mangaiti Bridge	Waitomo	,,	360	5	5
	710	Ngaroto Railway-station Road (£1 for £1)	Waipa	,,	120	0	0
	711	Ngaroto School Road (£1 for £1)	,,	,,	240	0	0
	712	Ngutunui to Kawa	Waitomo	,,	155	17	8
	713	Okupata (£1 for £1)	Kawhia	,,	1,535	16	10
	714	Oparau Bridge and approaches	,,	,,	1,141	14	9
	715	Pirongia to Te Rore West	Raglan	,,	100	0	0
	716	Pirongia to Kawhia	Kawhia and Waitomo	,,	91	1	5
	717	Pirongia West	Kawhia	,,	141	9	0
	724	Rangiaohia Road District roads (£1 for £1), (on account of £1,000)	Waipa	,,	250	0	0
	726	Rukuhia Railway-station Road (£1 for £1)	,,	,,	500	0	0
	727	Sainsbury Road	Raglan and Waitomo	,,	68	3	0
	728	Te Kowhai to Te Rapa (£2 for £1)	Waipa	,,	100	0	0
	729	Te Rahu (£1 for £1)	,,	,,	120	0	0
	730	Te Puhi	West Taupo	,,	163	9	1
	732	Tokanui to Wharepapa	,,	,,	53	7	6
	734	Vandy Road	Raglan	,,	110	1	8
	735	Waipa River Bridge (Pirongia), (£1 for £1)	Waipa	,,	453	2	1
	736	Walker's Gully culverts (£1 for £2)	,,	,,	6	15	0
	737	Awaiti Bridge	Kawhia	Taumarunui	2	0	6
	738	Caves Road (£1 for £1)	Waitomo	,,	714	10	10
	739	Hangatiki to Waitomo (£1 for £1), (on account of £4,000)	,,	,,	483	3	4
	741	Hauturu – Otorohanga Road to Ngutunui Stream (£1 for £1)	,,	,,	100	0	0
	742	Hauturu to Otorohanga (£1 for £1)	,,	,,	1,794	5	9
	746	Kawhia to Marokopa River (£1,721, £1 for £1)	Kawhia	,,	976	17	6
	747	Mangamahoe	Waitomo	,,	1	14	0
	748	Mangaohinga River Bridge	Kawhia	,,	272	1	11
	749	Mangatangi Bridge and approaches	,,	,,	22	0	0
	750	Mangawhero Bridge	Waitomo	,,	218	16	0
	751	Oamaru (£1 for £1)	,,	,,	208	0	10
	752	Oteke River Bridge	Kawhia	,,	15	17	8
	753	Otorohanga to Otewa	Waitomo	,,	358	13	6
	754	Otorohanga to Ouruwhero	,,	,,	50	0	0
	756	Puketarata	,,	,,	60	0	0
	757	Tapuae (£1 for £1)	,,	,,	100	0	0
	759	Turitea (£50, £1 for £1)	,,	,,	49	19	9
	765	Survey, acquisition, and legalization of roads, drains, gravel-pits, tramways, &c.	..	..	286	9	4
	766	Supervision	..	..	1,397	6	1
	767	Contingencies, including unforeseen expenditure incidental to the other items of the vote	..	..	13	17	9
	768	Miscellaneous works and services, including assistance towards the construction of roads, bridges, tracks, &c.	..	..	203	8	5
		Total—Auckland	..	..	44,677	5	10
		TAURANGA ROAD DISTRICT—					
	772	Harper Road	Rotorua	Tauranga	24	1	6
	773	Kaharoa	,,	,,	41	5	7
	774	Kapukapu	,,	,,	49	3	11
	776	Mamaku to Ngongotaha Mount	,,	,,	167	11	0
	779	Oropi Gorge Road	Tauranga	,,	93	18	7
	780	Rotorua to Ngongotaha Mount	Rotorua	,,	59	8	0
	787	Wairoa River Bridge (£1 for £1)	Tauranga	,,	*Cr.* 2,350	0	0

TABLE No. 4—*continued.*

STATEMENT showing the NET EXPENDITURE on ROADS, &c.—*continued.*

Vote No.	Item No.	Name of Work.	County.	Electorate.	Net Expenditure.		
		ROADS, ETC.—*continued.*					
		TAURANGA ROAD DISTRICT—*continued.*			£	s.	d.
109	789	Galatea to Te Teko	Whakatane	Bay of Plenty	110	0	0
	792	Lichfield to Atiamuri	East Taupo and West Taupo	..	28	15	0
	793	Maketu to Te Ngae	Rotorua and Tauranga	..	12	19	3
	795	Maraetotara	Whakatane	..	123	8	1
	796	Matata to Tamurenui Junction	,,	..	76	4	6
	798	Marupara to Ruatahuna	Whakatane and East Taupo	..	74	6	6
	799	Orakei Korako	East Taupo	..	21	12	0
	809	Rotorua to Taupo, via Waiotapu	Rotorua and East Taupo	..	80	9	4
	810	Rotowhero to Galatea	East Taupo and Whakatane	..	49	1	0
	811	Rotowhero to Murupara	Rotorua and East Taupo	..	93	5	8
	815	Taupo Village Streets	East Taupo	,,	46	11	6
	816	Tauranga to Te Puke (£1 for £1)	Tauranga	..	225	0	0
	818	Waimana River Bridge and approaches (Opouriao), (£1 for £1)	Whakatane	,,	1,453	4	4
	819	Waimangu Geyser to Kakaramea	Rotorua	,,	25	13	0
	820	Waimangu to Lake Rotomahana	,,	,,	21	12	0
	822	Whakahaupapa Stream Bridge (Herepuru South Road	Whakatane	,,	90	16	4
	823	Whakatane to Te Teko (£1 for £1)	..	,,	130	4	11
	824	Survey, acquisition, and legalization of roads, drains, gravel-pits, tramways, &c.	..	..	62	10	0
	825	Supervision	..	..	568	18	3
	826	Contingencies, including unforeseen expenditure incidental to the other items of the vote	..	..	0	3	0
	827	Miscellaneous works and services, including assistance towards the construction of roads, bridges, tracks, &c.	..	..	251	10	5
		Total—Tauranga	..	..	1,631	13	8
		GISBORNE ROAD DISTRICT—					
	828	Awanui to Waiomatatine	Waiapu	Bay of Plenty	100	0	0
	829	Gabriel's Gully to Conical Hill (£1 for £1)	Opotiki	..	100	0	0
	830	Gisborne to Tatapouri	Cook	..	400	0	0
	831	Gisborne to Tologa (£100, £1 for £1)	,,	..	227	0	0
	832	Gisborne to Waiapu, via Kai Inanga	Waiapu	..	100	0	0
	834	Hawai to Maraenui	Opotiki	..	300	0	0
	835	Kaiaua to Tologa Bay	Cook	..	120	0	0
	837	Karakatuwhero	Waiapu	..	100	0	0
	840	Mangohuku	Opotiki	..	24	2	0
	842	Matawai to Moanui (£1 for £1)	Waikohu	..	744	0	7
	843	Matokitoki	Cook	..	166	13	4
	845	Motu Falls Bridge to Porongahau Saddle, via Jackson's	Opotiki	..	200	0	0
	847	Muhunga Creek Bridge (£1 for £1)	Cook	..	75	0	0
	848	Nukuhou Bridge to Waimana (£1 for £1)	Opotiki	..	200	0	0
	850	Opotiki County flood damage	..	..	167	17	11
	852	Opotiki to Matahanea	,,	..	40	1	6
	853	Opotiki to Whakatane, via Nukuhou (£1 for £1)	Whakatane and Opotiki	..	580	10	4
	854	Otara River Bridge (£1 for £1 10s.)	Opotiki	..	733	7	1
	855	Peoples Road	,,	..	83	5	9
	857	Pouawa Bridge	Cook	..	424	8	0
	858	Puha to Whatatutu (£1 for £1)	Waikohu	..	147	0	9
	859	Rakauroa to Tahora	,,	..	385	8	6
	862	Small Grazing-run No. 60 (access)	Cook	..	0	18	0
	866	Te Waiti	Opotiki	..	42	4	0
	867	Tokomaru to Te Puia	Waiapu	..	300	0	0
	868	Tologa to Wigan	Cook	..	250	0	0
	872	Waiawa River Bridge (Ross Ford)	Opotiki	..	450	0	0
	873	Waimata to Arakihi	Cook	..	100	0	0
	877	Waioeka River Main Road (£520, £1 for £1), (on account of £4,000)	Opotiki	..	624	1	1
	878	Waiomoko Suspension-bridge (£1 for £1)	Cook	..	600	0	0
	879	Waiotahi Bridge to Kutarere	Opotiki	..	142	14	6
	880	Waiotahi River Traffic Bridge (£1 for £1)	..	..	200	0	0
	882	Waiotahi Parish (access to Section 493)	..	..	125	0	0
	883	Waiotahi Valley and Extension (£1 for £1)	..	..	73	2	6
	886	Ahimanu	Cook	Gisborne	200	0	0
	887	Awapuni (Willows Settlement), (£1 for £1)	,,	..	75	0	0
	888	Clydebank Settlement	Wairoa	..	139	0	8
	889	Floods Crossing Bridge	Cook	..	1,620	18	6
	891	Gisborne to Hangaroa (£100, £1 for £1)	..	..	200	0	0
	892	Gisborne to Muriwai (deviation), (£1 for £1)	..	..	750	0	0
	893	Gisborne to Wairoa County Boundary, via Tiniroto (£100, £1 for £1)	..	..	233	2	10

TABLE No. 4—*continued.*

STATEMENT showing the NET EXPENDITURE on ROADS, &c.—*continued.*

Vote No.	Item No.	Name of Work.	County.	Electorate.	Net Expenditure.		
		ROADS, ETC.—*continued.*					
		GISBORNE ROAD DISTRICT—*continued.*			£	s.	d.
109	894	Hangaroa to Tahora (Cook County Section), (£1,500, £1 for £1)	Cook	Gisborne	604	3	7
	895	Hangaroa to Waikaremoana (£1 for £1)	,,	,,	2,382	2	6
	896	Karaua	,,	,,	175	0	0
	897	Mangaone (£450, £1 for £1), (on account of £1,000)	Wairoa	,,	177	10	11
	898	Mangapahi (£1 for £1), (on account of £1,000)	,,	,,	130	0	0
	899	Mangapoike River Bridge (third crossing)	Cook	,,	118	16	8
	901	Matoetoe Creek Bridge	Wairoa	,,	560	15	7
	902	Muriwai to Morere	Cook	,,	250	0	0
	903	Ngatapa Settlement (£250, £1 for £1)	,,	,,	4	0	0
	904	Nuhaka River Bridge (Nuhaka Township)	Wairoa	,,	1,511	0	4
	905	Nuhaka River Road (£200, £1 for £1)	,,	,,	6	15	0
	906	Nuhaka to Tarewa	,,	,,	131	12	6
	907	Patutahi to Gentle Annie	Cook	,,	270	17	9
	908	Patutahi to Ngatapa (£1 for £1)	,,	,,	295	9	7
	909	Taruheru River Bridge (£1 for £1)	,,	,,	282	15	0
	910	Te Arai Valley Road	,,	,,	214	14	1
	911	Tokanui	,,	,,	343	1	6
	913	Waingake Crossing Bridge	,,	,,	1,036	13	6
	915	Wairoa to Nuhaka (£1 for £1), (on account of £3,000)	Wairoa	,,	719	5	1
	918	Frasertown to Waikaremoana (£1 for £1), (on account of £1,000)	,,	Hawke's Bay	100	0	0
	920	Ruakituri Valley (£1 for £1)	,,	,,	428	12	0
	922	Waihi Road (£1 for £1)	,,	,,	273	0	0
	924	Waikare–Taheke River Bridge	,,	,,	378	9	8
	925	Waikaremoana Accommodation House Road	,,	,,	89	10	6
	928	Wairoa to Waihua (£1 for £1), (on account of £2,000)	,,	,,	718	19	2
	929	Survey, acquisition, and legalization of roads, drains, gravel-pits, tramways, &c.	..	..	355	0	0
	930	Supervision	..	..	764	19	7
	932	Miscellaneous works and services, including assistance towards the construction of roads, bridges, tracks, &c.	..	..	99	3	3
		Total—Gisborne	..	..	23,967	5	1
		TE KUITI ROAD DISTRICT—					
	933	Aorangi	Ohura	Taumarunui	23	17	5
	934	Arapae (£1 for £1)	Waitomo	,,	2,087	0	5
	935	Aukopae to Otunui Landing	Ohura	,,	67	0	3
	938	Huioteka Stream Bridge	Waitomo	,,	99	6	4
	939	Kie Kie	,,	,,	75	14	9
	940	Kumara (£100, £1 for £1)	,,	,,	143	19	0
	941	Maire	,,	,,	97	0	0
	942	Mairoa (£1 for £1), (on account of £2,400)	,,	,,	748	14	9
	943	Mangakara	Ohura	,,	371	16	10
	946	Miroahuiao to Matiere (£200, £1 for £1)	Ohura and Waitomo	,,	390	18	2
	949	Oniao	Waitomo	,,	47	1	8
	951	Otuiti	Ohura	,,	42	8	3
	952	Owen Road	Waitomo	,,	13	4	10
	953	Parakoko	,,	,,	65	15	0
	954	Paro	,,	,,	6	1	6
	955	Poro-o-tarao to Taumarunui	Ohura and West Taupo	,,	30	3	0
	956	Potaka (£1 for £1), (on account of £3,500)	Waitomo	,,	160	15	0
	957	Pukearuhe (metalling), (£1 for £1)	,,	,,	469	18	6
	958	Pungarehu (£1 for £1)	,,	,,	293	10	0
	959	Te Kuiti to Rangitoto Improved-farm Settlement	,,	,,	117	19	8
	960	Te Kuiti to Te Kumi (£1 for £1)	,,	,,	742	2	3
	961	Tokirima (Kaikara Road to Maraekowhai Block)	Ohura	,,	54	7	4
	962	Tongaporutu to Mangaroa (East of Kotare Stream), (£250, £1 for £1), (on account of £1,500)	,,	,,	1,180	8	0
	963	Totoro (£1 for £1), (on account of £3,500)	Waitomo	,,	299	10	0
	964	Tumutumu to Waitomo	,,	,,	50	0	0
	966	Waikaka Stream Bridge	Ohura	,,	108	17	0
	968	Waitaanga North	,,	,,	354	7	0
	969	Waitangata	,,	,,	40	10	0
	971	Whenuakura	,,	,,	108	11	6
	972	Survey, acquisition, and legalization of roads, drains, gravel-pits, tramways, &c.	..	..	420	14	11

TABLE No. 4—*continued.*

STATEMENT showing the NET EXPENDITURE on ROADS, &c.—*continued.*

Vote No.	Item No.	Name of Work.	County.	Electorate.	Net Expenditure.		
		ROADS, ETC.—*continued.*					
		TE KUITI ROAD DISTRICT—*continued.*			£	s.	d.
109	973	Supervision	..	..	758	12	4
	974	Contingencies, including unforeseen expenditure incidental to the other items of the vote	..	..	5	15	3
	975	Miscellaneous works and services, including assistance towards the construction of roads, bridges, tracks, &c.	..	..	35	12	11
		Total—Te Kuiti	..	..	9,511	13	10
		NEW PLYMOUTH ROAD DISTRICT—					
	976	Awakino to Tirua Point (coast track)	Awakino	Taumarunui	150	17	5
	977	Kaka	Clifton	,,	95	0	0
	978	Kokakoroa	Kawhia and Awakino	,,	78	16	10
	979	Mangatoa	Awakino	,,	702	2	10
	980	Marangae Block roads	Whangamomona	,,	168	8	5
	981	Mataro (£1 for £1)	Clifton	,,	101	15	0
	982	Mimi to Mokau	,,	,,	874	5	8
	984	Mokau River Ferry (Mokau), (on account)	,,	,,	124	12	2
	985	Mokau Valley Road (Mokau Township Reserve)	Awakino	,,	91	16	8
	986	Ngatarawa	,,	,,	68	15	11
	987	Okoke (£1 for £1)	Clifton	,,	125	6	0
	988	Otaraoa	,,	,,	75	0	0
	989	Pukearuhe (£1 for £1)	,,	,,	175	0	0
	990	Tangitu Stream Bridge (Okoke Road)	,,	,,	147	10	9
	993	Uruti Stream Bridge (£1 for £1)	,,	,,	200	0	0
	994	Waitara River Bridge (Waitara), (£1 for £2)	Clifton and Taranaki	,,	2,528	0	0
	997	Carrington (Saunders Road to Newall Road (£150, £1 for £1)	Taranaki and Egmont	Taranaki	142	0	0
	998	Egmont Road (Upper)	Taranaki	,,	32	10	10
	999	Hill Road to Kotuku Road	,,	,,	50	0	0
	1001	Saunders Road (£1 for £1)	,,	,,	91	6	8
	1003	Koane	Eltham and Patea	Egmont	108	17	7
	1005	Moeawatea Ridge	Eltham	,,	46	1	1
	1008	Rawhitiroa (£1 for £1)	,,	,,	250	0	0
	1009	Wiremu Road (Kiri Road to Ngariki Road)	Egmont	,,	223	10	0
	1010	Arnold	Whangamomona	Stratford	80	15	0
	1011	Brewer (Strathmore to Murcott Road), (£1 for £1)	,,	,,	650	6	0
	1012	Junction Road (Purangi to Matau)	Clifton	,,	50	0	0
	1013	Kohi	Whangamomona	,,	351	10	8
	1014	Maikai	,,	,,	41	8	0
	1016	Mangaehu (Mangaehu Village to Punewhakau Village), (£1 for £1)	Stratford	,,	300	0	0
	1017	Mangaehu (Upper), (£1 for £1)	Whangamomona	,,	750	0	0
	1018	Mangaone Stream Bridge (Rerekino Road)	Clifton	,,	160	1	10
	1019	Mount Humphries Road	Stratford	,,	61	11	3
	1020	Okara	Whangamomona	,,	248	3	0
	1021	Okara River Bridge	,,	,,	47	1	10
	1024	Stratford to Stratford Mountain House	Stratford	,,	25	0	0
	1026	Tangarakau Valley Road	Whangamomona	,,	61	11	7
	1028	Waitara Valley (Tangitu Road to Mangere Road)	Clifton	,,	123	17	4
	1029	Waitiri	Stratford and Eltham	,,	118	6	3
	1031	York Road	Stratford	,,	50	0	0
	1032	Maben	Eltham, Hawera, and Patea	Patea	81	15	3
	1033	Mataimoana	Patea	,,	68	15	2
	1034	Moeawatea Valley	Eltham and Patea	,,	78	3	6
	1035	Opaku	Patea	,,	109	1	2
	1036	Wharariki	,,	,,	109	12	2
	1037	Survey, acquisition, and legalization of roads, drains, gravel-pits, tramways, &c.	..	..	71	9	6
	1038	Supervision	..	..	738	0	2
	1040	Miscellaneous works and services, including assistance towards the construction of roads, bridges, tracks, &c.	..	..	139	19	5
		Total—New Plymouth	..	..	11,167	16	11
		WANGANUI ROAD DISTRICT—					
	1041	Taringamutu Valley Road	West Taupo	Taumarunui	15	3	9
	1042	Arawata	Waimarino	Waimarino	50	0	0
	1043	Barton and Field's Road (£1 for £2)	Wanganui	,,	1,073	7	9
	1045	Field's Track to Junction	Waimarino	,,	13	18	6
	1048	Hikimutu	Kaitieke	,,	83	14	10
	1049	Kaimatangi	Wanganui	,,	144	10	0

TABLE No. 4—*continued.*

STATEMENT showing the NET EXPENDITURE on ROADS, &c.—*continued.*

Vote No.	Item No.	Name of Work.	County.	Electorate.	Net Expenditure.		
		ROADS, ETC.—*continued.*					
		WANGANUI ROAD DISTRICT—*continued.*			£	s.	d.
109	1050	Kaitieke (£500, £1 for £1), (on account of £3,500)	Kaitieke	Waimarino	84	3	6
	1055	Makotuku River Bridge	Waimarino	,,	250	0	0
	1056	Makokomiko (£100, £1 for £1)	Kaitieke	,,	94	2	10
	1057	Mangamahoe (North), (£1 for £1)	Rangitikei	,,	260	0	0
	1058	Mangamahu Valley	Wanganui	,,	135	0	0
	1061	Mangatiti	Waimarino	,,	245	14	9
	1064	Mataroa roads	Wanganui	,,	75	0	0
	1066	Ngamatea to Pungatawa (£1 for £1)	,,	,,	126	10	0
	1068	Oio (£100, £1 for £1), (on account of £500)	Kaitieke	,,	164	15	8
	1071	Paengaroa	Wanganui and Rangitikei	,,	80	8	0
	1073	Pokatea (£250, £1 for £1), (on account of £1,900)	Kaitieke	,,	402	10	8
	1075	Pukeatua (£250, £1 for £1), (on account of £600)	,,	,,	48	2	5
	1077	Rotoaira to Waimarino	Kaitieke, East Taupo, and West Taupo	,,	116	3	7
	1078	Tauakira Block Road (deviation)	Wanganui	,,	75	19	0
	1078	Te Maire (£150, £1 for £1), (on account of £700)	Kaitieke	,,	142	18	5
	1080	Tokaanu Wharf Road	East Taupo	,,	44	3	10
	1081	Tuahu	Waimarino	,,	69	13	9
	1082	Waimarino to Retaruke (£100, £1 for £1), (on account of £1,500)	Kaitieke	,,	126	3	0
	1083	Waipapa	Wanganui	,,	70	2	9
	1085	Waitoka Road	,,	,,	101	10	0
	1087	Wanganui Valley Road (£150, £1 for £1)	Kaitieke	,,	4	8	10
	1088	Wilson's Road (£300, £1 for £1)	Wanganui	,,	300	0	0
	1089	Ahu Ahu (£1,385, £1 for £1), (on account of £3,000)	Waitotara	,,	957	5	2
	1091	Kauarapaoa	,,	,,	172	6	11
	1093	Omata (£200, £1 for £1)	Patea	,,	60	5	0
	1094	Piercy Road Bridge	Waitotara	,,	128	9	8
	1095	Ridge Road	Patea	,,	171	19	11
	1097	Wanganui River Bridge (£1 for £3)	Wanganui	Wanganui	1,946	13	8
	1103	Whareroa Road (Parakeretu Block)	Rangitikei	Rangitikei	326	1	9
	1104	Survey, acquisition, and legalization of roads, drains, gravel-pits, tramways, &c.	..	..	411	17	0
	1105	Supervision	..	..	1,388	3	0
	1106	Contingencies, including unforeseen expenditure incidental to the other items of the vote	..	..	*Cr.* 26	11	5
	1107	Miscellaneous works and services, including assistance towards the construction of roads, bridges, tracks, &c.	..	..	161	1	6
		Total—Wanganui	..	..	10,095	18	0
		NAPIER ROAD DISTRICT—					
	1108	Puketitiri Hot Springs Road to Taharua Station Road (Te Matai)	Hawke's Bay	Hawke's Bay	38	16	3
	1109	Esk River Bridge (£1 for £1)	,,	,,	900	0	0
	1111	Napier to Puketitiri (£1 for £2)	,,	,,	650	0	0
	1112	Pohue to Titiokura Saddle	,,	,,	2,018	3	11
	1113	Puketitiri to Hot Springs	,,	,,	150	3	1
	1114	Run No. 11, Kaweka Survey District (access)	,,	,,	3	1	0
	1116	Tongoio Lagoon (deviation)	Wairoa	,,	2,646	2	9
	1121	Waitara to Pohukura	,,	,,	211	0	6
	1124	Havelock North to Waimarama Settlement (Tukituki Hill deviation), (£1 for £1)	Hawke's Bay	Waipawa	250	0	0
	1125	Hawea	,,	,,	100	0	0
	1127	Makaretu Block Roads	Waipawa	,,	285	15	2
	1129	Mangatahi Stream Bridge (£2 for £1)	Hawke's Bay	,,	450	0	0
	1138	Waingongoro	,,	,,	5	19	6
	1141	Waipawamate Stream Bridge (£1 for £1)	Waipawa	,,	150	0	0
	1143	Long Range Road (£1 for £1), (on account of £1,500)	Patangata	Pahiatua	1,329	0	0
	1145	Mangaorapa	,,	,,	176	3	4
	1146	Motuotaraia Road (£1 for £2)	,,	,,	150	0	0
	1147	Ngahape Road (£1 for £1)	,,	,,	47	0	0
	1150	Survey, acquisition, and legalization of roads, drains, gravel-pits, tramways, &c.	..	..	345	0	10
	1151	Supervision	..	..	632	2	4
		Total—Napier	..	..	10,538	8	8

TABLE No. 4—*continued.*

STATEMENT showing the NET EXPENDITURE on ROADS, &c.—*continued.*

Vote No.	Item No.	Name of Work.	County.	Electorate.	Net Expenditure.		
		ROADS, ETC.—*continued.*					
		WELLINGTON ROAD DISTRICT—			£	s.	d.
109	1163	Lagoon Road (north), (£100, £1 for £1)	Kiwitea	Oroua	83	16	0
	1165	Mangahuia Road East	"	"	50	0	0
	1167	Mangapapa (£1 for £1)	"	"	50	0	0
	1170	Mangawharariki Road (fencing cliff), (£1 for £1)	"	"	100	0	0
	1171	Mangoira Gorge Road	"	"	100	0	0
	1172	Mania (£100, £1 for £1)	"	"	50	0	0
	1173	Omatane (£100, £1 for £1)	Rangitikei	"	112	17	0
	1177	Rangitane	Rangitikei and Kiwitea	"	72	19	8
	1178	Tunipo	Pohangina	"	200	0	0
	1187	Berntson's Slip	Weber and Dannevirke	Pahiatua	157	10	0
	1189	Cross Road	Dannevirke	"	300	0	0
	1190	Dannevirke to Herbertville, via Waipatiki (Weber County Section), (£870, £1 for £1), (on account of £1,000)	Weber	"	359	6	9
	1191	Dew Road	Pahiatua	"	175	14	2
	1192	Esdale (£1 for £1)	Weber	"	72	6	2
	1197	Makairo to Coonoor	Pahiatua	"	14	16	0
	1198	Makuri to Pongaroa (£1 for £1)	Akitio and Pahiatua	"	91	8	1
	1199	Makuri Saddle to Pongaroa, via Rakaunui (£1 for £1)	Akitio	"	173	15	0
	1201	Mangapapa Bridge (£1 for £1)	Woodville	"	65	0	0
	1204	Mangatoro Stream foot-bridge	Dannevirke	"	117	1	6
	1205	Mangatoro Stream Bridge, Sixth Crossing (£400, £1 for £1)	"	"	*Cr.* 312	9	4
	1208	Mill Stream Road and Bridge	Weber	"	127	13	0
	1209	Oporae	"	"	100	0	0
	1214	Piper Road (£75, £1 for £1)	Pahiatua	"	23	1	0
	1215	Pongaroa to Weber County Boundary (£1 for £1)	Akitio	"	169	4	6
	1216	Range Road	Woodville	"	50	0	0
	1218	Rimu Road (£1 for £1)	Akitio	"	130	7	1
	1219	Ruaroa Road to Te Rehunga	Dannevirke	"	261	2	8
	1222	Tamaki No. 1 to Law Road	"	"	8	1	4
	1223	Te Awaputahi Bridle-track	Weber	"	73	8	11
	1225	Top Grass Road and Bridge	Woodville	"	460	1	5
	1232	Aohanga River Bridge (Lnogford), (£1 for £1)	Akitio	Masterton	600	0	0
	1233	Barton's Line (between Dagg's Road and Dryer's Rock), (£1 for £1)	Mauriceville	"	230	0	0
	1235	Bowen Road (South)	Eketahuna and Mauriceville	"	96	3	7
	1236	Central Mangaone Road (East)	Eketahuna	"	159	17	0
	1237	Eketahuna to Alfredton (£1 for £1)	"	"	44	16	6
	1238	Glendonald to Wairere	Masterton and Wairarapa South	"	300	0	0
	1240	Hinemoa to Alfredton	Masterton and Pahiatua	"	200	8	0
	1247	Keene's Bridge (£1 for £1)	Eketahuna	"	50	8	4
	1249	Mangaorongo	Mauriceville	"	71	7	6
	1257	Priest's Bridge (£1 for £1)	Eketahuna	"	110	0	0
	1258	Quarry Road	"	"	345	16	0
	1260	Te Hoe Stream Bridge (£1 for £1)	Masterton	"	310	0	0
	1261	Tiraumea Valley Road (£1 for £1)	Pahiatua	"	50	0	0
	1264	Waihoki Valley (£200, £1 for £1)	Akitio and Masterton	"	71	1	2
	1267	Alfredton to Tinui (£270, £1 for £2)	Masterton and Castlepoint	Wairarapa	229	8	1
	1272	Fernyhurst Road and Deviation	Masterton	"	281	2	1
	1273	Gladstone to Wharau (£1 for £1)	Wairarapa South	"	55	13	9
	1277	Homewood to Kaiwhata	Masterton	"	114	14	3
	1278	Kaiwhata (£50, £1 for £1)	Wairarapa South	"	200	0	0
	1280	Kiriwhakapapa	Masterton	"	185	0	0
	1288	Masterton to Tinui (£1 for £1)	Castlepoint	"	50	0	0
	1291	Ngarara Bridge (£1 for £1)	Featherston	"	190	0	0
	1294	Riversdaie Road (£100, £1 for £1)	Masterton	"	60	0	0
	1302	Tinui Valley (£1 for £1)	Castlepoint	"	101	0	0
	1304	Uruti Road (£100, £1 for £1)	Masterton	"	185	0	0
	1308	Wangaehu Valley Road (Mahupuku)	Featherston and Wairarapa South	"	150	0	0
	1309	Whakataki to Castlepoint (£1 for £1)	Castlepoint	"	205	14	11
	1310	Wharau to Flat Point (£50, £1 for £1)	Wairarapa South	"	100	0	0
	1316	Manakau North	Horowhenua	Otaki	136	12	6
	1318	Ngatiawa Bridge (£1 for £1)	Horowhenua and Hutt	"	125	0	0
	1321	Otaki Gorge Road (£1 for £1)	Horowhenua	"	35	9	3
	1322	Otaki to Manakau (£1 for £1)	"	"	54	16	1
	1325	Taungata Bridge (£1 for £1)	"	"	728	13	10
	1326	Te Horo to Mangaone Valley	"	"	59	14	0
	1332	Mungaroa River Bridge	Hutt	Hutt	578	0	0

TABLE No. 4—*continued*.

STATEMENT showing the NET EXPENDITURE on ROADS, &c.—*continued*.

Vote No.	Item No.	Name of Work.	County.	Electorate.	Net Expenditure.		
		ROADS, ETC.—*continued*.					
		WELLINGTON ROAD DISTRICT—*continued*.			£	s.	d.
109	1333	Orongorongo	Hutt	Hutt	75	0	0
	1336	Whiteman's Valley	,,	,,	147	14	6
	1337	Cook Road	..	Wellington Suburbs	55	12	6
	1338	Cottle Road to Normandale	,,	Ditto	75	0	0
	1339	Harris Road	,,	,,	56	6	10
	1340	Hawtrey Settlement	Makara	..	100	0	0
	1343	Moonshine to Wainui	Hutt	..	42	3	11
	1344	Pahautanui to Upper Hutt (£100, £1 for £1)	..	..	130	0	0
	1346	Plimmerton to Pukerua	..	,,	130	4	9
	1348	Pukerua to Paekakariki (£1 for £1)	..	,,	66	11	3
	1350	Survey, acquisition, and legalization of roads, drains, gravel-pits, tramways, &c.	..	..	313	16	0
	1351	Supervision	..	..	704	2	7
	1352	Contingencies, including unforeseen expenditure incidental to the other items of the vote	..	..	2	8	2
	1353	Miscellaneous works and services, including assistance towards the construction of roads, bridges, tracks, &c.	..	..	53	14	8
		Total—Wellington	..	..	11,855	12	11
		NELSON ROAD DISTRICT—					
	1357	French Pass, Admiralty Bay, and Croixelles Tracks	Sounds	Nelson	26	11	3
	1358	Nelson to Rai Saddle (£100, £1 for £1)	Waimea	,,	65	0	0
	1362	Aaron Creek Road	Takaka	Motueka	50	0	0
	1365	Apple Valley	Waimea	..	100	0	0
	1366	Awaroa to Totaranui	Takaka	,,	5	0	0
	1370	Brooklyn Creek protective works	Waimea	..	31	5	4
	1373	Burnt Section Road	Takaka	,,	69	0	0
	1377	Craigieburn Road	..	,,	100	0	0
	1380	Edmondson Creek Bridge	..	,,	100	0	0
	1381	Edward Road (Lower Moutere)	Waimea	,,	200	0	0
	1382	Ellis Creek Road	..	,,	127	8	3
	1384	Flood damage (Motueka), (£1 for £1)	..	,,	300	0	0
	1385	Fowler's to Painter's	Takaka	..	140	0	0
	1386	Gardner Road (Upper Moutere)	Waimea	..	48	5	0
	1388	Glen Rae	,,	..	50	0	0
	1390	Hamama	Takaka	,,	35	0	0
	1392	Hope Valley bridges	Waimea	..	334	8	6
	1393	Horopito	,,	,,	99	19	7
	1396	Lewis Flat River protective works	Takaka	..	100	0	0
	1397	Little Sydney Road	Waimea	,,	68	10	0
	1399	Longford to Waingaro	Takaka	,,	100	0	0
	1402	Marahau to Sandy Bay	Waimea	..	60	0	0
	1403	Motueka Coach Road (old)	..	..	100	0	0
	1405	Motueka River Bridge (Kohatu to Westport)	..	..	1,426	17	4
	1406	Motueka River protective works	,,	..	400	0	0
	1407	Motueka River Road (West Bank)	..	..	105	0	0
	1408	Motueka Valley (Faulkener's)	..	,,	200	0	0
	1409	Motueka Valley to Whangapeka	,,	,,	94	5	0
	1410	Moutere Mud-flat and extension	..	,,	814	0	6
	1411	Moutere Valley Road	,,	,,	500	0	0
	1412	Neudorf to Dovedale	,,	..	17	7	5
	1414	Onekaka Bridge	Collingwood	,,	5	15	1
	1416	Pariwhakaoho	Takaka	,,	163	13	0
	1418	Pohara to Terakohe	,,	,,	678	0	0
	1420	Quail Valley	Waimea	,,	136	0	0
	1421	Rameka Creek Track	Takaka	,,	50	0	0
	1423	Reece Road	Collingwood	,,	248	0	0
	1424	Rising Sun Valley	Waimea	,,	50	0	0
	1425	Riwaka Road Board roads	..	,,	100	0	0
	1426	Riwaka to Sandy Bay and Marahau (Coast Track)	..	,,	39	19	6
	1427	Rosedale Hill Road	,,	,,	116	15	0
	1429	Sherry Valley to Kaka	,,	,,	210	0	0
	1430	Sherry Valley to Tui	,,	..	162	0	0
	1431	Spring Creek to Lindsay Crossing	Takaka	,,	100	0	0
	1432	Stanton Creek Bridge	Collingwood	,,	135	0	0
	1433	Supplejack Valley	Waimea	,,	50	0	0
	1435	Takaka Hill Road	Takaka and Waimea	..	169	17	6
	1436	Takaka Main Road	Takaka	,,	100	0	0
	1437	Takaka River Bridge (Long Plain Road)	,,	..	182	11	5
	1438	Tasman Valley Road Extension	Waimea	..	217	10	0
	1439	Torrent Bay Track	Takaka	,,	47	9	2
	1440	Trass Valley Road	Waimea	,,	150	0	0
	1441	Valley Hill Road (deviation)	,,	,,	50	0	0

TABLE No. 4—*continued.*

STATEMENT showing the NET EXPENDITURE on ROADS, &c.—*continued.*

Vote No.	Item No.	Name of Work.	County.	Electorate.	Net Expenditure. £	s.	d.
		ROADS, ETC.—*continued.*					
		NELSON ROAD DISTRICT—*continued.*			£	s.	d.
109	1442	Vant's to Bubu	Takaka	Motueka	70	0	0
	1443	Wai-iti Valley (Upper)	Waimea	,,	172	10	0
	1445	Wairoa Gorge Road	,,	,,	45	0	0
	1446	Wairoa River Bridge	,,	,,	278	2	6
	1447	Waitapu and Totaranui roads	Takaka	,,	78	15	0
	1449	Wangapeka to Tadmor River	Waimea	,,	50	0	0
	1452	Woodstock to Stanley Brook	,,	,,	100	0	0
	1453	Baigent Road (£50, £1 for £1)	Murchison	Buller	11	0	0
	1459	Mangles Valley Road (£100, £1 for £1)	,,	,,	85	16	4
	1460	Matakitaki River protective works	,,	,,	12	9	9
	1461	Owen bank cutting, Buller Road	,,	,,	0	15	0
	1463	Ragg Road	,,	,,	21	10	0
	1465	Survey, acquisition, and legalization of roads, drains, gravel-pits, tramways, &c.	..	..	123	10	1
	1466	Supervision	..	..	592	13	9
	1468	Miscellaneous works and services, including assistance towards the construction of roads, bridges, tracks, &c.	..	..	70	10	0
		Total—Nelson	..	..	10,743	1	3
		BLENHEIM ROAD DISTRICT—					
	1469	Brown Stream Bridge	Marlborough	Nelson	246	16	3
	1470	Deep Creek to Dead Horse Creek	,,	,,	133	12	6
	1472	Kaiuma Saddle	Sounds and Marlborough	,,	102	4	4
	1473	Muttontown Creek Road	Marlborough	,,	194	0	0
	1474	Pelorus Bridge to Tinline (£1 for £1)	,,	,,	50	0	0
	1475	Rai River Bridge and approaches (Carluke)	,,	,,	917	4	11
	1476	Rai Saddle to Havelock (£1 for £1)	,,	,,	150	0	0
	1478	Wakamarina (West)	,,	,,	73	1	9
	1479	Arapawa Island	Sounds	Wairau	32	10	1
	1480	Awatere Road District flood damage	Awatere	,,	200	0	0
	1482	Beach Road to White's Bay	Sounds	,,	100	0	0
	1484	Boyd Road (access to S.G.R. 186)	Awatere	,,	200	0	0
	1485	Clarence Bridge protective works	,,	,,	320	14	8
	1488	Flaxbourne River to Ure River (£1 for £1)	,,	,,	249	12	4
	1490	Havelock to Kaituna (£1 for £1)	Marlborough	,,	104	0	0
	1493	Kaituna–Tuamarina (protective works), (£1 for £1)	,,	,,	47	1	3
	1494	Mahakipawa to Havelock (£50, £1 for £1)	,,	,,	166	8	0
	1495	Manuka Island Road	,,	,,	100	0	0
	1496	Omaka Road District bridges (£1 for £1)	Awatere	,,	150	0	0
	1498	Picton to Grove	Marlborough	,,	214	3	0
	1499	Port Gore to Endeavour Inlet	Sounds	,,	15	19	6
	1500	Resolution Bay Road	,,	,,	43	11	6
	1502	Sounds County Tracks	,,	,,	2,027	4	11
	1503	Timms River Bridge (Cat Point), (£1 for £1)	Marlborough	,,	204	13	0
	1505	Waikakaho	,,	,,	125	0	0
	1506	Wairau flood damage (£1 for £1) (on account)	,,	,,	1,148	11	10
	1509	Wairau River Traffic-bridge (near Renwick), (£1 for £1)	,,	,,	4,586	18	9
	1512	Hapuku River Bridge (on account of £9,000)	Kaikoura	Hurunui	*Cr.* 4	3	6
	1513	Kaikoura County flood damage (£1 for £1), (on account)	,,	,,	189	9	9
	1517	Survey, acquisition, and legalization of roads, drains, gravel-pits, tramways, &c.	..	..	65	5	7
	1518	Supervision	..	..	441	0	8
		Total—Blenheim	..	..	12,595	5	1
		WESTPORT ROAD DISTRICT—					
	1521	Blue Duck Creek Road	Buller	Motueka	88	3	0
	1522	Connor's to Oparara Beach	,,	,,	143	0	0
	1523	Karamea River (improvement)	,,	,,	150	0	0
	1525	Llewellyn Track (Mokihinui)	,,	,,	97	3	6
	1528	Batty's Creek Bridge	,,	Buller	198	12	8
	1529	Buller Road to Smith's (Inangahua Junction)	,,	,,	100	0	0
	1530	Carter Junction to Cape Foulwind	,,	,,	200	0	0
	1531	Charleston to Grey County boundary	,,	,,	400	0	0
	1532	Organ Road	,,	,,	100	0	0
	1533	Waimangaroa Bridge to Beach	,,	,,	181	0	0
	1534	Waimangaroa River Bridge	,,	,,	350	15	0
	1536	Survey, acquisition, and legalization of roads, drains, gravel-pits, tramways, &c.	..	..	77	0	0
	1537	Supervision	..	..	312	12	5
		Total—Westport	..	..	2,398	6	7

TABLE No. 4—*continued.*

STATEMENT showing the NET EXPENDITURE on ROADS, &c.—*continued.*

Vote No.	Item No.	Name of Work.	County.	Electorate.	Net Expenditure.		
		ROADS, ETC.—*continued.*					
		GREYMOUTH ROAD DISTRICT—			£	s.	d.
109	1540	Cochrane Road	Inangahua	Buller	171	10	0
	1541	Larry Creek Road	,,	,,	18	0	0
	1542	Reefton to Maruia (£500, £1 for £1)	,,	,,	427	17	9
	1543	Baxter Bridge	Grey	Grey	122	8	0
	1544	Casolas Creek Bridge (£1 for £1)	Inangahua	,,	137	0	0
	1546	Cobden to Barrytown	Grey	,,	120	0	0
	1547	Grey County flood damage (£1 for £1)	,,	,,	105	0	0
	1550	Grey River protective works (Brunner Tunnel)	,,	,,	385	3	4
	1551	Hibernian Bridge	,,	,,	55	10	0
	1552	Inangahua Bridge (Reefton), (£1 for £1)	Inangahua	,,	661	9	5
	1555	Maimai Road	,,	,,	174	13	9
	1557	Slatey Creek to Big River	Grey	,,	300	0	0
	1558	Arahura River protective works (£1 for £1)	Westland	Westland	75	0	0
	1559	Arthur's Pass Tunnel Road	,,	,,	73	15	0
	1560	Awatuna Railway to Ocean Beach	,,	,,	50	0	0
	1561	Big Wanganui River Bridge	,,	,,	2,689	4	11
	1562	Bird Road (£50, £1 for £1)	,,	,,	194	0	0
	1564	Brandt Road (£50, £1 for £1)	,,	,,	128	9	0
	1565	Dorothy Falls Track	,,	,,	108	17	9
	1566	Eastern Hohonu Bridge	Grey	,,	145	0	0
	1567	Ferguson Road	Westland	,,	109	15	0
	1568	Greenstone Bridge	Grey	,,	191	3	7
	1569	Grey Valley to Teremakau	,,	,,	475	9	2
	1570	Haddock Road (improvement and extension)	Westland	,,	56	10	5
	1572	Hohonu River Bridge (Pounamu)	Grey	,,	215	2	6
	1573	Hokitika Gorge protective works	Westland	,,	60	16	6
	1574	Hokitika South Beach to Ruatapu	,,	,,	300	0	0
	1577	Kokatahi River protective works	,,	,,	211	8	9
	1578	Kokatahi Roads (widening)	,,	,,	86	3	0
	1581	Lake Kanieri Road (widening)	,,	,,	90	0	0
	1582	Lake Kanieri Road bridges	,,	,,	94	10	11
	1583	Mahitahi Road	,,	,,	100	0	0
	1584	Marsden Road (old)	Grey	,,	100	0	0
	1585	Martyn River Bridge	Westland	,,	45	1	6
	1586	Mikonui to Bold Head	,,	,,	110	2	9
	1587	Mitchell's to Inchbonnie	Grey	,,	50	0	0
	1589	Municipal Road extension (£50, £1 for £1)	Westland	,,	100	0	0
	1590	Murray Road extension	,,	,,	165	0	0
	1591	Nancy River Track	Grey	,,	100	0	0
	1594	Omotumotu Bridge	,,	,,	93	7	2
	1595	Papakamai	Westland	,,	228	12	7
	1596	Red Jack's Bridge	Grey	,,	250	0	0
	1597	Starvation Point Road	,,	,,	300	0	0
	1598	Two-mile Road and extension (Arahura)	Westland	,,	45	15	8
	1600	Wainihinihi Bridge	,,	,,	368	17	6
	1602	Walker Creek Road	,,	,,	107	7	3
	1603	Westland Ferry Service	,,	,,	200	0	0
	1604	White Road extension	,,	,,	250	0	0
	1605	Zigzag Road (Kumara)	,,	,,	150	0	0
	1606	Survey, acquisition, and legalization of roads, drains, gravel-pits, tramways, &c.	..	..	55	7	0
	1607	Supervision	..	..	227	18	0
	1609	Miscellaneous works and services, including assistance towards the construction of roads, bridges, tracks, &c.	..	..	208	8	2
		Total—Greymouth	..	..	11,289	16	4
		CHRISTCHURCH ROAD DISTRICT—					
	1611	East Oxford to Wharfdale (Richardson's Track)	Ashley	Hurunui	200	0	0
	1612	Gower Road	Cheviot	,,	300	0	0
	1613	Grey River Bridge (£1 for £1)	Ashley	,,	750	0	0
	1615	Main Kowhai River Bridge (Leithfield), (£1 for £1)	Kowai	,,	286	15	0
	1618	Okuku Bridge protective works (£1 for £2)	Ashley	,,	30	0	0
	1619	South Kowai River Bridge (Balcairn), (£1 for £1)	Kowai	,,	256	3	10
	1626	Waipara River Traffic-bridge (£1 for £1)	Waipara and Kowai	,,	886	11	6
	1627	Weka Pass (£1 for £1)	Waipara	,,	93	15	0
	1628	Dyer Pass (£1 for £1)	Heathcote	Lyttelton	125	0	0
	1629	Heathcote–Lyttelton Bridle-track (£1 for £1)	,,	,,	50	0	0
	1630	King Edward VII Road	Halswell and Mount Herbert	,,	248	13	1
	1633	Ruapaki Road (White's), (£1 for £1)	Heathcote	,,	100	0	0
	1634	Wright Road to Blenheim Road (£1 for £1)	Waimairi	Riccarton	300	0	0
	1639	Tuahiwi Native Reserve Road (Kaiapoi), (£2 for £1)	Rangiora	Kaiapoi	115	11	0

TABLE No. 4—*continued.*

STATEMENT showing the NET EXPENDITURE on ROADS, &c.—*continued.*

Vote No.	Item No.	Name of Work.	County.	Electorate.	Net Expenditure.		
		ROADS, ETC.—*continued.*					
		CHRISTCHURCH ROAD DISTRICT—*continued.*			£	s.	d.
109	1640	Page's Road (£1 for £1)	Heathcote	Avon	250	0	0
	1641	Coalgate to Gorge Road	Selwyn	Selwyn	287	12	7
	1643	Mount Somers to Mesopotamia (£1 for £1)	Ashburton	..	61	16	0
	1645	Ruapuna Settlement (School Road), (£1 for £1)	,,	..	95	0	0
	1646	Shepherd Bush to Maronan (£1 for £1)	,,	,,	100	0	0
	1648	Upper Downs Road (£1 for £1)	..	,,	105	0	0
	1649	Burke's Drain (£1 for £1)	Halswell	Ellesmere	49	12	0
	1655	Okute River bridges (£1 for £1)	Wairewa	,,	162	0	0
	1660	North Opuha River Bridge (£2 for £1)	Geraldine	Ashburton	101	18	0
	1663	Station Creek Bridge (£2 for £1)	Mackenzie	,,	102	0	0
	1664	Temoana River Bridge (£1 for £1)	Geraldine	,,	850	0	0
	1665	Waihi River Bridge (£1 for £1)	,,	,,	400	0	0
	1668	Fairlie to Timaru (culverts), (£1 for £1)	Mackenzie	Temuka	107	0	0
	1669	Fork River Bridge	,,	,,	54	0	0
	1670	Greenstone Island Road	Geraldine	,,	34	10	0
	1671	Haldon Pastoral Runs, access (£1 for £1)	Mackenzie	,,	105	0	0
	1675	Mackenzie Pass Road (£1 for £1)	,,	,,	52	0	0
	1677	O'Connor Road (£1 for £1)	Waimate	,,	50	0	0
	1680	Pareora River Bridge (£1 for £1)	..	..	250	0	0
	1683	Sodwall Road (£1 for £1)	,,	..	103	7	0
	1684	Sullivan Hill	Levels	..	250	0	0
	1687	Totara Valley (£1 for £1)	,,	..	100	0	0
	1689	Warden's to Robinson's (£1 for £1)	..	,,	100	0	0
	1690	Cole Hill (£1 for £1)	..	Timaru	50	0	0
	1692	Morgan Road (£1 for £1)	,,	,,	125	0	0
	1695	Glenavy to Redcliff (£1 for £1)	Waimate	Waitaki	85	0	0
	1700	Wallace Road (£1 for £1)	..	..	115	0	0
	1701	Survey, acquisition, and legalization of roads, drains, gravel-pits, tramways, &c.	..	..	2	10	0
	1702	Supervision	..	..	295	5	4
	1703	Contingencies, including unforeseen expenditure incidental to the other items of the vote	..	..	4	7	0
	1704	Miscellaneous works and services, including assistance towards the construction of roads, bridges, tracks, &c.	..	..	107	10	4
		Total—Christchurch	..	..	8,297	17	8
		DUNEDIN ROAD DISTRICT—					
	1707	Fern Gully Road deviation	Waitaki	Waitaki	55	17	6
	1708	Kakanui River Bridge (£1 for £1)	..	..	287	4	7
	1710	Landon Creek Bridge	,,	..	100	12	0
	1711	McPherson Road	,,	..	200	0	0
	1713	Ohau Lake Road	,,	..	203	5	0
	1714	Otamatapaio Bridge	,,	..	311	7	0
	1717	Victoria Road (Elderslie Settlement)	,,	..	200	0	0
	1723	Dunback to Macraes	Waihemo	Oamaru	226	10	0
	1724	Dunback to Pigroot	..	..	61	1	5
	1728	Karitane Creamery to Merton Railway-station	Waikouaiti	..	175	0	0
	1733	Muddy Creek to County boundary	Waihemo	..	101	1	2
	1735	Pleasant River Bridge, near Goodwood Railway-station (£150, £1 for £1)	..	..	278	3	1
	1736	Puketiraki Native Reserve	Waikouaiti	..	50	14	0
	1739	Sheep-yards to Corner Bush	..	..	100	0	0
	1741	Swampy Peak Road (Hummock), (£1 for £1)	..	..	50	0	0
	1742	Thorburn Road (£1 for £1)	..	..	50	0	0
	1743	Tommy's Flat Creek Bridge (£1 for £1)	..	..	49	15	0
	1749	Centre Road (Strath Taieri)	Taieri	Otago Central	125	0	0
	1751	Corrigal Road (Block I, Tiger Hill)	Vincent	..	100	0	0
	1760	Kelso to Heriot (£1 for £1)	Tuapeka	..	75	0	0
	1762	Lake Bridge to Berwick (£1 for £1)	Taieri	..	150	0	0
	1774	Shank Road	Clutha	,,	50	0	0
	1776	Arrow to Crown Range Saddle (£1 for £1)	Lake	Wakatipu	92	2	0
	1777	Arrow Hospital to McDowell's	,,	..	50	0	0
	1780	Cardrona to Mount Barker	,,	..	100	0	0
	1781	Cardrona to Pembroke (£100, £1 for £1)	,,	..	102	6	6
	1782	Cardrona River Light-traffic Bridge (£1 for £1)	Vincent	..	250	0	0
	1788	Crown Range Saddle to Wanaka	Lake	..	150	0	0
	1790	Garston to Black Bridge (£50, £1 for £1)	..	..	86	7	4
	1791	Glenorchy to Paradise	..	..	100	0	0
	1792	Glenorchy to Routeburn	,,	..	103	5	0
	1794	Greenstone River Suspension-bridge	..	..	52	5	2
	1797	Kerin Road	Vincent	..	100	0	0
	1799	Lake Harris to Lake Howden	Lake	..	51	8	3
	1808	Queenstown to Moke Lake	..	..	200	0	0
	1810	Shotover Bridge and approaches (£1 for £1)	,,	..	*Cr.* 392	1	6
	1813	Tarras to Lindis Pass (£150, £1 for £1)	Vincent	..	100	0	0

TABLE No. 4—*continued.*

STATEMENT showing the Net Expenditure on Roads, &c.—*continued.*

Vote No.	Item No.	Name of Work.	County.	Electorate.	Net Expenditure.		
					£	s.	d.
		ROADS, ETC.—*continued.*					
		Dunedin Road District—*continued.*					
109	1816	Brighton to Taieri Main Road (Scrogg's Hill Deviation)	Taieri	Chalmers	11	0	6
	1817	Camp to Portobello	Peninsula	,,	150	0	0
	1818	Constance Road (Sawyer Bay)	Waikouaiti	,,	50	0	0
	1819	Dick Road	Peninsula	,,	93	10	0
	1820	Green Island to Taieri Mouth	Taieri	,,	100	0	0
	1823	Lower Kaik Beach Road	Peninsula	,,	408	0	0
	1829	Otakau School Road	..	,,	74	7	6
	1830	Pipikaretu	,,	,,	73	0	0
	1833	Pyramid Road	,,	,,	39	16	0
	1834	Raione Beach Road	,,	,,	155	0	0
	1835	Sandymount Road	,,	,,	150	0	0
	1837	Taieri Bridge to Pukekura	Taieri	,,	100	1	3
	1839	Warren Road	Waikouaiti	,,	50	0	0
	1940	West Harbour Road	,,	,,	44	9	0
	1842	Wickliff Bay to Cape Saunders Lighthouse	Peninsula	,,	100	0	0
	1843	Kaikorai Valley (Roslyn)	Taieri	Dunedin West	150	0	0
	1845	Ocean Beach Domain protective works	..	Dunedin South	350	0	0
	1848	Balclutha Traffic-bridge (on account of £3,000)	Bruce and Clutha	Bruce	59	19	6
	1850	Benhar to Stirling (£1 for £1)	Bruce	..	215	19	3
	1852	Blackburn Creamery Road (£1 for £1)	,,	,,	88	1	9
	1854	Bruce Hill (Lawrence to Tuapeka Mouth)	Tuapeka	,,	100	0	0
	1862	Craigie Road	Bruce	..	100	0	0
	1869	Greenfield Road (£1 for £1)	..	..	100	0	0
	1870	Inch-Clutha River protective works (£100, on account of £1,000), (£1 for £1)	..	,,	2	10	0
	1872	Lawson Hill	,,	,,	100	0	0
	1876	Manuka to Mount Stuart (£1 for £1)	,,	..	50	0	0
	1881	Morgan Road	,,	,,	200	0	0
	1883	Mount Stuart (Hillend), (£50, £1 for £1)	,,	,,	32	5	0
	1890	Reserve Road	Tuapeka	,,	200	0	0
	1891	Roulston Road	Bruce	,,	100	0	0
	1892	Sawmill Road	,,	,,	100	0	0
	1893	Scott's Havelock Road (£1 for £1)	Tuapeka	,,	150	0	0
	1894	Taieri Mouth Bridge	Taieri and Bruce	,,	1,408	11	9
	1906	Wangaloa to Coombe Hay (£1 for £1)	Bruce	,,	61	2	6
	1912	Catherwood Road (£50, £1 for £1)	Clutha	Clutha	80	0	0
	1932	Martin Road (£50, £1 for £1)	,,	,,	50	0	0
	1934	McLennan River Bridge to Caberfeidh Railway-station	..	..	273	9	5
	1935	Millar Road	,,	,,	33	3	0
	1939	Owaka Main Road to Cannibal Bay (£50, £1 for £1)	,,	,,	99	19	6
	1955	Swamp Road (£1 for £1)	,,	,,	62	10	0
	1958	Tahakopa Valley (£100, £1 for £1)	,,	,,	64	0	0
	1960	Tapanui to Tapanui Railway-station (£1 for £1)	Tuapeka	,,	75	0	0
	1962	Tuck Creek Road	Clutha	,,	50	0	0
	1970	Survey, acquisition, and legalization of roads, drains, gravel-pits, tramways, &c.	..	..	2	10	0
	1971	Supervision	..	..	387	1	7
	1072	Contingencies, including unforeseen expenditure incidental to the other items of the vote	..	..	1	16	0
	1973	Miscellaneous works and services, including assistance towards the construction of roads, bridges, tracks, &c.	..	..	221	13	9
		Total—Dunedin	..	..	10,715	0	9
		Invercargill Road District—					
	1981	Lumsden to Balfour (£1 for £1)	Southland	Wakatipu	100	0	0
	1982	Lumsden to Lowther (£200, £2 for £1)	,,	,,	264	13	9
	1989	Pyramid to Riversdale (£1 for £1)	,,	,,	100	0	0
	1991	Turnbull Road (£1 for £1)	,,	,,	50	0	0
	1992	Waikaia Bush Track (£1 for £1)	,,	,,	48	5	9
	1996	Beange Bush to Ridder Bush (£1 for £1)	,,	Clutha	50	0	0
	1999	Brewster Road (£1 for £1)	,,	,,	8	9	6
	2003	Mokoreta Main Road (£50, £1 for £1)	,,	,,	50	0	0
	2004	Pascoe Road (£50, £1 for £1)	,,	,,	23	12	0
	2006	Quarry Hills to Waikawa (£1 for £1)	,,	,,	100	0	0
	2013	Allison and McLeish Road (£1 for £1)	Wallace	Wallace	95	0	0
	2014	Alton No. 3 Block roads (£125, £1 for £1)	..	,,	390	7	9
	2016	Barry Road (Orepuki)	,,	,,	88	17	6
	2018	Belmont to Blackmount (£1 for £1)	,,	,,	197	4	4
	2019	Benmore – Limehills River Channel	Southland	,,	329	12	0
	2020	Best Road (Ringway), (£1 for £1)	Wallace	,,	50	0	0
	2021	Birchwood Stream Bridge (£2 for £1)	,,	,,	144	16	3
	2026	Colac Bay Road (from beach)	,,	,,	50	0	0
	2029	Dipton to Glenure Bush (£1 for £1)	Southland		50	0	0

TABLE No. 4—*continued.*

STATEMENT showing the NET EXPENDITURE on ROADS, &c.—*continued.*

Vote No.	Item No.	Name of Work.	County.	Electorate.	Net Expenditure. £	s.	d.
		ROADS, ETC.—*continued.*					
		INVERCARGILL ROAD DISTRICT—*continued.*					
109	2031	Drummond Factory Road (£1 for £1)	Wallace	Wallace	50	0	0
	2035	Ermedale Settlement roads	,,	,,	452	0	0
	2040	Forde Road (Woodlaw)	,,	,,	50	0	0
	2043	Grassy Creek deviation (£100, £1 for £1)	,,	,,	150	0	0
	2044	Gully Road (Block XIV, Waiau S.D.)	,,	,,	150	0	0
	2045	Hall-Gallagher Road	,,	,,	100	0	0
	2047	Heel and Mitchell Road (£1 for £1)	,,	,,	25	0	0
	2048	Jacobs River Hundred, Block XVIIf, Sections 55 to 49	,,	,,	92	1	6
	2050	Lang and McDonald Road	Southland	,,	100	0	0
	2051	Lindsay's Calcium Road (£1 for £1)	Wallace	,,	50	0	0
	2055	Longwood, Block III (Parson's)	,,	,,	100	0	0
	2058	Longwood, Block XVI (to McInerney's)	,,	,,	70	0	0
	2059	Longwood, Block XVII (Sections 12, 14, and 15), (£50, £1 for £1)	,,	,,	50	0	0
	2061	Manapouri to Flaxy Creek	,,	,,	50	0	0
	2062	Manuka Road (£1 for £1)	,,	,,	131	6	2
	2063	Mathieson Road	,,	,,	50	0	0
	2064	McFarlane Road (£1 for £1)	,,	,,	100	0	0
	2065	McNeill Road (Jacobs River Hundred), (£100, £1 for £1)	,,	,,	87	9	8
	2069	Moffat and Forbes Road (£1 for £1)	,,	,,	50	0	0
	2071	Mossburn to Te Anau, via Manapouri	,,	,,	218	12	6
	2074	Nightcaps to Wairio (£1 for £1)	,,	,,	50	0	0
	2075	North Road (Block XIII, Waiau S.D.)	,,	,,	100	0	0
	2076	O'Connell Road (£1 for £1)	,,	,,	47	8	3
	2077	Ohai Stream Road	,,	,,	200	0	0
	2078	Oraki Creek clearing	,,	,,	100	0	0
	2080	Orawia to Tuatapere (£100, £1 for £1)	,,	,,	175	1	4
	2082	Otaitai Bush deviation (£1 for £1)	,,	,,	50	0	0
	2085	Reynold Road (Wrey's Bush), (£1 for £1)	,,	,,	50	0	0
	2086	Riley and McCleery Road	,,	,,	240	6	9
	2090	Sanford Road	,,	,,	80	0	0
	2091	Scott's Gap (Lower), (£1 for £1)	,,	,,	45	13	3
	2093	Stag Creek Bridge (£100, £1 for £1)	,,	,,	199	8	4
	2096	Waiau, Blocks XIII and XIV (main roads)	,,	,,	78	18	11
	2097	Waiau River Bridge (Tuatapere)	,,	,,	757	14	7
	2101	Ward Road (Longwood)	,,	,,	200	0	0
	2103	Whitestone River Bridge (Mossburn – Te Anau Road)	,,	,,	2	7	6
	2104	Birch Road (£1 for £1)	Southland	Mataura	50	0	0
	2108	Caesar Road	,,	,,	200	0	0
	2112	Coster Road (Hedgehope)	,,	,,	200	0	0
	2115	Cross Road, Titipua	,,	,,	50	0	0
	2117	Dobbie Road (Edendale), (£1 for £1)	,,	,,	50	0	0
	2119	Edendale to Dacre (£1 for £1)	,,	,,	300	0	0
	2122	Hedgehope to Mataura (£1 for £1)	,,	,,	65	6	8
	2127	Invercargill, Block XXIII (South Side Sections 73, 74, and 75)	,,	,,	50	0	0
	2129	Invercargill Hundred, Block XXIV, Sections 28 to 30)	,,	,,	159	16	3
	2132	Kapuka to Gorge (£100, £1 for £1)	,,	,,	400	0	0
	2137	Mabel Hall to Factory	,,	,,	50	0	0
	2144	Millar Road (Hedgehope)	,,	,,	100	0	0
	2150	Osmond Road	,,	,,	49	9	0
	2157	Scenic Reserve Road (Lothian Hundred), (£1 for £1)	,,	,,	135	0	0
	2162	Tramway Road (Mabel)	,,	,,	98	18	2
	2165	Turner Road (£1 for £1)	,,	,,	100	0	0
	2167	Waimatua to Everett's Hills (£1 for £1)	,,	,,	50	0	0
	2170	Welsh Road (Sections 96 and 97, Block XXIII, Invercargill Hundred)	,,	,,	12	18	0
	2171	Woodward Road (Morton Mains), (£1 for £1)	,,	,,	50	0	0
	2175	Inglewood Road	,,	Invercargill	100	2	3
	2177	Lyon Road	,,	,,	22	10	0
	2179	Waihopai River protective works (£1 for £1)	,,	,,	55	0	0
	2180	Williams Road (Inglewood)	,,	,,	50	0	0
	2181	Awarua Plains School Road	,,	Awarua	39	0	0
	2182	Black Road (Otatara)	,,	,,	200	0	0
	2183	Bluff Main Road	,,	,,	54	18	4
	2184	Bragg Road	Stewart Island	,,	80	0	0
	2187	Butterfield Beach to Horseshoe Bay	,,	,,	69	0	0
	2192	Cemetery Road (Bluff)	Southland	,,	250	0	0
	2197	Ditch Road (Mason Bay)	Stewart Island	,,	313	0	0
	2201	Elgan Terrace	,,	,,	65	0	0
	2203	Flagstaff Road	Southland	,,	200	0	0
	2207	Forest Hill Hundred (Section 304)	,,	,,	100	0	0
	2212	Gordon Road, Otatara	,,	,,	100	0	0
	2213	Half-moon Bay to Mill Creek	Stewart Island	,,	85	0	0
	2214	Half-moon Bay to Thule	,,	,,	93	0	0

TABLE No. 4—*continued*.

STATEMENT showing the NET EXPENDITURE on ROADS, &c.—*continued*.

Vote No.	Item No.	Name of Work.	County.	Electorate.	Net Expenditure.		
		ROADS, ETC.—*continued*.					
		INVERCARGILL ROAD DISTRICT—*continued*.			£	s.	d.
109	2215	Harold Road	Stewart Island	Awarua	162	3	0
	2216	Hedgehope–Makarewa Channel	Southland	,,	8	0	0
	2217	Hick's Road to Butterfields	Stewart Island	,,	134	1	0
	2219	Horseshoe Bay Back Road	,,	,,	97	0	0
	2221	Invercargill Hundred, Block XVI, Section 13	Southland	,,	100	0	0
	2223	Invercargill Hundred, Block XXII, Sections 28, 29, and 30 (road to)	,,	,,	50	0	0
	2225	Jewitt Road (Hedgehope)	,,	,,	190	9	6
	2226	Leask Road to Traill's	Stewart Island	,,	17	4	0
	2227	Lee Bay to Bob's Point	,,	,,	69	0	0
	2228	Lee Road, Block XXII (Invercargill Hundred)	Southland	,,	16	12	0
	2229	Leggett Road (£1 for £1)	,,	,,	163	0	0
	2234	Makarewa Outfall Drain	,,	,,	100	0	0
	2236	Maori Beach to Otagu	Stewart Island	,,	57	0	0
	2239	Marshall Road (Spar Bush)	Southland	,,	100	0	0
	2240	Mason Bay Road	Stewart Island	,,	174	7	8
	2243	McCrostie Road (£1 for £1)	Southland	,,	75	0	0
	2249	New River Estuary Road (south wall)	,,	,,	725	11	9
	2254	North Arm Road	Stewart Island	,,	148	12	0
	2255	Ocean Beach Road	Southland	,,	100	0	0
	2258	Point Road	,,	,,	249	19	11
	2259	Princess Road (Greenhills)	,,	,,	250	0	0
	2260	Russell Road, Greenhills	,,	,,	130	11	5
	2261	Ryan Creek Road	Stewart Island	,,	106	1	6
	2266	Stewart Island Main Road	,,	,,	11	5	0
	2267	Sutton Road (Boggy Burn)	Southland	,,	50	0	0
	2268	Thule to Ryan Creek	Stewart Island	,,	84	3	9
	2271	Tourist roads (Stewart Island)	,,	,,	104	2	6
	2276	Waikiwi Stream Bridge	Southland	,,	200	0	0
	2277	Waimatuku Main Road through bush	,,	,,	79	9	3
	2281	Winton Creek Channel (Upper)	,,	,,	41	14	10
	2283	Winton, Block III, Section 12 (outfall drain)	,,	,,	44	0	0
	2284	Wright Bush Road (£1 for £1)	,,	,,	100	0	0
	2287	Supervision	..	..	619	12	9
	2288	Contingencies, including unforeseen expenditure incidental to the other items of the vote	..	..	*Cr.* 3	12	0
	2289	Miscellaneous works and services, including assistance towards the construction of roads, bridges, tracks, &c.	..	..	210	8	8
		Total—Invercargill	..	..	15,508	4	9
		GENERAL—					
	2291	Compensation for injuries to employees while in discharge of their duties, and contingent expenses in connection with same	..	..	1,102	6	6
	2292	Engineering surveys	..	..	109	19	1
	2294	Plant not chargeable to any particular work	..	..	237	10	10
	2295	Roadmen's huts, store-rooms, &c.	..	..	347	6	5
	2296	Stone-crushers and road-making plant	..	..	143	5	5
		Total—General	..	..	1,940	8	3
		Vote No. 109—Total for 1912–13	..	..	209,136	14	0
		BACKBLOCKS ROADS, ETC.					
		WHANGAREI ROAD DISTRICT—					
110	1	Aponga to Mangakahia	Whangarei	Bay of Islands	100	0	0
	5	Awanui to Mangonui, via Taipa	Mangonui	,,	37	13	3
	6	Awaroa Stream Bridge (on account)	Hokianga	,,	351	11	7
	7	Blue Gorge Road	Mangonui	,,	3	16	0
	8	Broadwood to Herekino	Hokianga	,,	343	9	4
	9	Broadwood to Runa Runa	,,	,,	4	14	0
	10	Broadwood to Takahue	Mangonui and Hokianga	,,	24	1	6
	11	Driving Creek Bridge	Hokianga	,,	6	14	6
	12	Fairburn to Otukai	Mangonui	,,	36	0	0
	13	Great North Road to Otukai	,,	,,	56	5	0
	14	Haha Bridge	Hokianga	,,	50	2	6
	15	Herekino to Kaitaia	Mangonui	,,	88	8	0
	17	Huahua to Mangakino	Hokianga	,,	19	2	6
	20	Humphrey Road	,,	,,	48	19	9
	23	Kohumaru	Mangonui	,,	14	17	0
	25	Mangakahia River Bridge (on account of £1,650)	Bay of Islands	,,	8	14	9

TABLE No. 4 - *continued.*

STATEMENT showing the NET EXPENDITURE on ROADS, &c.—*continued.*

Vote No.	Item No.	Name of Work.	County.	Electorate.	Net Expenditure.		
		BACKBLOCKS ROADS, ETC.—*continued.*					
		WHANGAREI ROAD DISTRICT—*continued.*			£	s.	d.
110	26	Mangamuka to Oruru	Hokianga and Mangonui	Bay of Islands	55	0	0
	27	Mangamuka to Victoria Valley	Ditto	,,	423	4	0
	29	Mangonui to Kohumaru Block, via Kenana	Mangonui	,,	346	17	0
	30	Mangonuiowae Stream Bridge (Rotokakahi)	Hokianga	,,	294	9	6
	32	Matawherohia to Kaeo	Whangaroa	,,	93	14	0
	36	Okaharu Stream Bridge	Hokianga	,,	55	7	11
	37	Okaihau to Kaikohe	Bay of Islands	,,	120	3	0
	39	Opouteke Road	Hokianga	,,	193	19	6
	41	Oruaiti to Kenana	Mangonui	,,	16	13	9
	42	Otukai to Mangatete, via Creamery Reserve	,,	,,	145	18	7
	46	Paewhenua Bridge	,,	,,	83	12	2
	47	Pakotai	Hokianga	,,	79	13	5
	51	Pikiparia to Te Karae	,,	,,	281	3	11
	54	Ruatangata to Otakairangi	Whangarei	,,	100	0	0
	55	Smoothy Road	Hokianga	,,	108	5	7
	56	Takahue to Herekino	Mangonui	,,	95	16	2
	57	Takahue S.D., Block IV (access)	,,	,,	81	9	0
	59	Takahue S.D., Block X (access)	,,	,,	9	8	0
	61	Tapuketaru	Hokianga	,,	4	0	0
	63	Te Karae Stream Bridge	Bay of Islands	,,	4	12	9
	64	Te Puia Bridge	,,	,,	158	8	3
	66	Waiharara to Hohoura	Mangonui	,,	140	18	2
	67	Waiote-Kumarau Bridge	Hokianga	,,	22	13	9
	70	Whangape to Mangonuiowae, via Rotokakahi Block	,,	,,	151	14	10
	72	Whangape to Whakarapa	,,	,,	3	0	0
	73	Whirinaki to Taita	,,	,,	24	4	3
	75	Katui to Marlborough Settlement	,,	Kaipara	283	16	5
	77	Mangakahia Road bridges	Whangarei	,,	76	5	6
	78	Mangatu to Katui	Hokianga	,,	68	19	0
	79	Tarawhati	,,	,,	256	0	1
	80	Tutamoe S.D., Block V (access to Section 10)	,,	,,	107	17	7
	81	Waipoua S.D., Section 26, Block XI (access)	,,	,,	197	7	5
	87	Waikare to Pacific Cliff	Whangarei	Marsden	50	0	0
	89	Supervision	..	..	720	16	8
	90	Miscellaneous works and services, including assistance towards the construction of roads, bridges, tracks, &c.	..	..	80	17	8
		Total—Whangarei	..	..	6,130	17	6
		AUCKLAND ROAD DISTRICT—					
	91	Bayer Road to Section 273, Waiwera Parish	Rodney	Marsden	220	1	8
	94	Mareretu to Bull's	Otamatea	,,	40	11	0
	97	Mason Road (coast road)	,,	,,	40	11	0
	99	Waipu to Mareretu (extension to Nutsford's)	,,	,,	166	1	3
	100	Waiwhiu to Whangaripo	Rodney	,,	50	0	0
	102	Birch's to Lindquist Road (Paparoa)	Otamatea	Kaipara	100	0	0
	104	Makarau Railway-station to West Coast Road	Waitemata	,,	115	2	7
	108	Tikinui to Creamery	Hobson	,,	100	0	0
	110	Waimauku to West Coast	Waitemata	,,	300	0	0
	112	Great Barrier Island (Whangapara to Awanga)	No county	Waitemata	375	3	1
	113	Great Barrier Island (Harataonga to Port Fitzroy)	,,	,,	69	2	4
	114	Great Barrier Island (Tryphena to Kaitoke Beach)	,,	,,	215	11	1
	116	Huia to Whatipu	Waitemata	Eden	100	0	0
	121	Graham's Beach to Palmer's	Franklin	Franklin	11	15	9
	123	Otau to Hunua	,,	,,	129	12	1
	124	Otau Road	,,	,,	16	2	0
	125	Paparimu to Maungatawhiri	,,	,,	9	14	7
	126	Pollok Main Road	,,	,,	18	7	10
	128	Wairoa River to Otau	Manakau	,,	66	6	7
	129	Coromandel to Mercury Bay (continuation of main through road)	Coromandel	Thames	527	0	0
	131	Kaihere	Ohinemuri	,,	484	8	0
	132	Kaimarama Settlement to Waikawau	Coromandel	,,	100	0	0
	135	Kuaotunu to Opito Settlement	,,	,,	101	14	2
	137	Mangawhara	Ohinemuri	,,	360	0	0
	138	Maungatawhiri to Waitakaruru	Waikato and Thames	,,	133	16	0
	139	Miranda to Maramarua	Waikato	,,	5	9	0
	140	Opito to Wharekaho	Coromandel	,,	50	0	0
	142	Parakete Creek Bridge (Port Charles)	,,	,,	100	0	0
	144	Port Charles to Ahiroa	,,	,,	50	0	0
	145	Sullivan's Bridge to Kaimarama	,,	,,	400	0	0
	147	Tahuna to Proctor's	Ohinemuri	,,	116	10	7
	148	Taupiri Parish (access to Section 485)	Waikato	,,	78	6	6

TABLE No. 4—*continued.*

STATEMENT showing the NET EXPENDITURE on ROADS, &c.—*continued.*

Vote No.	Item No.	Name of Work.	County.	Electorate.	Net Expenditure.		
		BACKBLOCKS ROADS, ETC.—*continued.*					
		AUCKLAND ROAD DISTRICT—*continued.*			£	s.	d.
110	149	Torehapa	Ohinemuri	Thames	12	9	0
	151	Waiti	,,	,,	161	18	11
	152	Whenuakite to Hot-water Beach	Coromandel	,,	50	0	0
	153	Aotea to Raglan	Raglan	Raglan	97	7	6
	154	Cogswell Road	,,	,,	12	9	0
	157	Kauroa to Pakoka	,,	,,	372	11	4
	158	Kirikiri to Te Akau through Section 60	,,	,,	99	17	9
	159	Klondyke	,,	,,	111	0	9
	161	Pakihi to Okete	,,	,,	327	10	2
	162	Ruapuke to Aotea	,,	,,	0	18	0
	163	Ruapuke Mountain Road	,,	,,	229	11	11
	164	Ruapuke Mountain Road to Te Mata	,,	,,	54	2	0
	165	Takapaunui to Ruapuke Mountain Road	,,	,,	1	18	3
	166	Te Mata to Ruapuke	,,	,,	100	0	0
	167	Te Mata to Te Uku	,,	,,	200	0	0
	170	Whangape Parish (Sections 126, 127, and 128)	,,	,,	48	2	10
	171	Kauri to Harapepe	,,	Waikato	73	5	0
	172	Kawhia to Aotea	,,	,,	100	0	0
	173	Koromatua	Waipa	,,	100	0	0
	175	Mangaorongo Bridge, No. 1	West Taupo	,,	97	3	6
	178	Mangaiti	Waitomo	,,	303	5	5
	181	Okupata Junction to Pekanui	Kawhia and Waitomo	..	102	17	5
	182	Pakoka Bridge (Pakihi to Okete Road)	Raglan	,,	70	16	4
	183	Pehehau to Kaniwhaniwha	,,	,,	60	4	4
	186	Waitetuna to Aotea	Kawhia and Raglan	,,	295	10	10
	187	Wharauroa	,,	,,	17	19	6
	188	Awaroa to Mahoe	Kawhia	Taumarunui	179	11	9
	189	Awaroa to Waiharakeke	,,	,,	168	9	6
	190	Hauturu	Waitomo and Kawhia	..	31	15	6
	191	Kaimango	Kawhia	..	211	0	6
	192	Kauri	,,	,,	99	19	5
	193	Kauri Branch Road	..	..	30	0	0
	194	Kihi	..	..	351	13	6
	196	Kinohaku to Waiharakeke	,,	,,	400	0	0
	197	Lemon Point to Te Maika Road	,,	,,	110	9	1
	198	Mahoe	,,	,,	255	13	11
	199	Marokopa River Bridge (Mangapohue)	Awakino and Kawhia	..	538	5	7
	201	Otorohanga to Hangatiki – Waitomo Road	Waitomo	..	74	17	6
	202	Otorohanga to Pirongia	,,	..	27	1	1
	204	Tapuae	..	..	103	0	0
	205	Taumatatotara East	Kawhia	,,	60	6	6
	206	Taumatatotara West	,,	,,	145	15	0
	207	Te Maika	..	..	111	7	5
	208	Te Maika to Marokopa	,,	,,	18	10	9
	209	Waihohonu	Waitomo	..	81	10	0
	211	Supervision	..	.	1,432	17	8
	212	Miscellaneous works and services, including assistance towards the construction of roads, bridges, tracks, &c.	..	..	90	17	0
		Total—Auckland	..	..	12,275	8	6
		TAURANGA ROAD DISTRICT—					
	215	Clayton Road	Rotorua	Tauranga	66	9	9
	216	Clover Road	Tauranga	,,	76	3	5
	217	Dansey Road	Rotorua	..	89	3	9
	218	Faulkner Road	Tauranga	,,	48	8	0
	219	Harray Road	,,	,,	48	0	0
	220	Kaimai Road	Tauranga and Matamata	,,	842	2	10
	221	Kaimai (access to Sections 579 to 583, Te Papa Parish)	Tauranga	,,	14	4	3
	223	Mamaku to Maraeroa – Oturoa Block	Rotorua	..	61	12	6
	224	Mangorewa Gorge to Mamaku	,,	,,	299	12	3
	225	Ngamuawahine	Tauranga	,,	79	17	4
	226	Ngawaro to Te Puke	Rotorua and Tauranga	..	73	10	0
	227	Omanawa	Tauranga	,,	22	14	4
	230	Puwhenua	Rotorua	,,	30	12	0
	234	Te Ahuru Bridges	Tauranga	,,	998	18	1
	235	Whataroa	Rotorua	,,	62	11	0
	236	Whataroa to Matai Road	,,	,,	1	15	0
	237	Hereperu North	Whakatane	Bay of Plenty	220	12	3
	238	Hereperu South	Rotorua	,,	97	8	0
	241	Kaikokupu to Taheke	,,	,,	4	19	0
	243	Korano	Tauranga	,,	69	0	1
	244	Maniatutu	Rotorua	,,	65	0	6

TABLE No. 4—*continued.*

STATEMENT showing the NET EXPENDITURE on ROADS, &c.—*continued.*

Vote No.	Item No.	Name of Work.	County.	Electorate.	Net Expenditure.		
		BACKBLOCKS ROADS, ETC.—*continued.*					
		TAURANGA ROAD DISTRICT—*continued.*			£	s.	d.
110	245	Opouriao Valley Road to Wainui and Mataorie Landing	Whakatane	Bay of Plenty	185	0	0
	246	Pikowai North	,,	,,	5	8	0
	247	Pikowai South	Rotorua	,,	147	13	9
	248	Pongakawa to Lake Rotoehu	Rotorua and Tauranga	..	75	12	11
	250	Rangiuru to Mangorewa Gorge	Ditto	..	100	10	10
	251	Ross Road	Whakatane	,,	23	9	0
	252	Ruatahuna to Waikaremoana	,,	,,	744	19	5
	254	Stanley Road to Opouriao, via Section 348, Waimana Parish	..	,,	4	11	0
	257	Whirinaki Valley Road	East Taupo and Rotorua	,,	55	15	0
	258	Supervision	..	..	617	12	7
		Total—Tauranga	..	..	5,233	6	10
		GISBORNE ROAD DISTRICT—					
	260	Appleton Road	Opotiki	Bay of Plenty	75	11	0
	261	Armstrong Road	Waikohu	,,	139	0	3
	263	Fraser Road	,,	,,	50	0	0
	264	Haupoto	Opotiki and Waiapu	,,	50	0	0
	267	Kowhai	Opotiki	,,	88	9	5
	269	Mata River to Waitahaia	Waiapu	,,	138	15	0
	270	Matawai to Motu (Neill Road)	Waikohu	,,	896	7	4
	271	Motu River Bridge (Moanui Road), (Upper Crossing)	,,	,,	64	18	9
	272	Omaukuru	Opotiki	,,	232	3	6
	274	Opato	,,	,,	230	8	6
	275	Opotiki to Motu	,,	,,	2,685	15	6
	276	Pakihi	,,	,,	3,065	19	6
	278	Philp Road	,,	,,	100	0	0
	279	Ruatuna to Ohiwa Landing	,,	,,	83	2	3
	280	Tapuwaeroa Valley	Waiapu	,,	100	0	0
	281	Te Araroa to Te Awatere	,,	..	71	0	0
	283	Tutaetoko	Opotiki	,,	467	18	8
	287	Waiapu Inland (Waikohu County Section)	Waikohu	..	285	0	0
	288	Waiaua Block access	Opotiki	,,	250	0	0
	289	Waiawa to Hawai	,,	,,	392	9	0
	290	Waimata to Waiapu Inland Road (Todd's)	Cook	..	100	0	0
	293	Waioeka River Bridge (Upper), (Waioeka River Main Road)	Opotiki	,,	165	6	0
	294	Waioeka River Bridge (Upper), (Okuraata Crossing)	,,	..	503	6	6
	295	Waioeka River to Matawai	,,	..	1,003	3	11
	298	Whinray	,,	,,	100	0	0
	299	Whitikau Block to Pakihi Road	,,	,,	3	0	0
	300	Wilton Road	,,	,,	199	17	0
	301	Gisborne to Rotorua (Stock)	Cook and Waikohu	Gisborne	90	13	7
	304	Mangapoike Valley (east end)	Cook and Wairoa	,,	29	13	6
	305	Mangapoike River Bridge (Nos. 1 and 2)	Cook	..	528	17	6
	306	Mangapoike Valley (west end)	Wairoa	..	2,828	2	5
	308	Mutuera	Waikohu	,,	300	0	0
	309	Waikati	Wairoa	..	214	19	11
	314	Kokahu	,,	Hawke's Bay	75	8	7
	315	Mangarewarewa	,,	,,	108	19	0
	316	Matukuhia	,,	,,	0	12	0
	317	Ruakituri River Bridge (Boothman's)	,,	,,	1,567	15	5
	319	Waikaremoana S.D. (access to Run 79)	,,	,,	116	0	0
	321	Supervision	..	..	814	1	10
	322	Miscellaneous works and services, including assistance towards the construction of roads, bridges, tracks, &c.	..	..	92	2	10
		Total—Gisborne	..	..	18,308	18	8
		TE KUITI ROAD DISTRICT—					
	323	Arapae (widening)	Waitomo	Taumarunui	266	0	0
	328	Huhatahi	Ohura	,,	89	4	11
	329	Kaeaeae	Waitomo	..	98	9	3
	330	Kaikara	Ohura	..	18	18	0
	331	Kakahi	,,	,,	45	9	4
	333	Kakahi Stream Bridge	,,	,,	113	8	3
	334	Kohua	Waitomo	,,	13	5	6
	335	Kopuha	Ohura	..	38	10	4
	337	Kururau	,,	,,	311	13	2
	338	Kururau Stream Bridge	,,	,,	*Cr.* 30	0	0
	339	Makaihikatoa	,,	,,	44	7	8

TABLE No. 4 *continued.*

STATEMENT showing the NET EXPENDITURE on ROADS, &c.—*continued.*

Vote No.	Item No.	Name of Work.	County.	Electorate.	Net Expenditure.		
					£	s.	d.
		BACKBLOCKS ROADS, ETC.—*continued.*					
		TE KUITI ROAD DISTRICT—*continued.*					
110	342	Mangaotaki to Mairoa	Waitomo	Taumarunui	156	3	3
	344	Mangapapa	Ohura	..	294	8	11
	350	Mokauiti	Waitomo	..	45	3	1
	353	Ohura River Bridge (Mangapapa Road)	Ohura	..	31	1	10
	354	Ohura (North of Paparata Saddle)	,,	..	1,918	16	7
	355	Opatu Block (access)	,,	..	204	6	0
	357	Opetea	,,	..	65	3	10
	361	Otunui South	,,	..	66	1	3
	366	Paraheka	Waitomo	..	136	11	8
	367	Paraketu	Ohura	..	126	11	0
	369	Pirere	,,	..	144	4	5
	371	Pongahuru Stream Bridge	,,	..	150	0	0
	374	Roto	,,	..	129	13	10
	376	Ryan Road	,,	..	92	14	10
	378	Te Kuiti to Mokau (east of Mangaotaki)	Waitomo	..	1,939	8	1
	379	Tokirima Road to Wanganui River	Ohura	..	170	8	2
	380	Turoto	,,	..	152	0	7
	381	Waikaka	,,	..	387	2	3
	383	Waipawa	Waitomo	..	204	11	5
	386	Waitawhena	Ohura and Waitomo	..	1,264	11	1
	387	Waitawhena Road bridges	Ditto	..	559	0	9
	390	Supervision	..	..	708	4	4
		Total—Te Kuiti	..	..	9,955	13	7
		NEW PLYMOUTH ROAD DISTRICT—					
	392	Awakino Valley (Lower) (on account of £5,000)	Awakino	Taumarunui	1,442	10	8
	393	Awakino Valley (Upper)	,,	..	585	9	11
	394	Kairimu	,,	..	131	12	6
	395	Kiritehere (on account of £3,000)	,,	..	618	2	9
	396	Kiritehere bridges	,,	..	144	12	4
	397	Kiwi	Clifton	..	1,738	17	8
	398	Kohuratahi	Whangamomona	..	31	12	6
	399	Mahoenui to Totoro	Awakino	..	217	11	6
	400	Mangakokopu	,,	..	199	2	1
	401	Manganui (on account of £5,000)	,,	..	1,043	0	1
	402	Mangaotaki Valley (Upper)	,,	..	125	6	3
	404	Mangapohue	Kawhia, Awakino, and Waitomo	..	665	14	1
	405	Mangatoro	Clifton	..	275	0	0
	406	Marokopa River to Mahoenui	Awakino	..	698	5	11
	407	Marokopa Valley	Awakino and Kawhia	..	881	9	6
	408	Moki	Clifton	..	2,232	0	3
	409	Moki Stream Bridge (on account of £800)	,,	..	128	17	2
	410	Ohura (south of Paparata Saddle)	Clifton, Whangamomona, and Stratford	..	2,359	17	7
	411	Papakino	Clifton	..	397	11	3
	412	Pomorangi	Awakino	..	162	9	6
	413	Rerekino	Clifton	..	763	7	11
	414	Tangarakau River Bridge (top crossing)	Ohura	..	73	5	9
	415	Tangitu	Clifton	..	399	2	0
	416	Te Kuiti to Mokau (west of Mangaotaki)	Awakino	..	901	5	0
	417	Tongaporutu to Mangaroa (west of Kotare Stream)	Clifton	..	577	12	11
	418	Waikawau	Awakino	..	212	4	0
	420	Whakahau	,,	..	220	18	11
	421	Carrington	Taranaki	Taranaki	4	6	6
	422	Rawhitiroa	Eltham	Egmont	374	11	9
	423	Tangahoe (Whareroa to Rehu Village)	Hawera	,,	441	0	9
	424	Whenuakura Valley	Eltham and Hawera	,,	532	1	10
	425	Manga	Stratford	Stratford	1,042	7	2
	426	Mangaoapa (Junction Road to Mohakau Road)	,,	,,	930	12	0
	427	Mangaowata	Whangamomona	..	648	16	11
	428	Mangare	,,	..	684	2	1
	429	Marco	,,	..	385	11	5
	430	Matau River bridges (on account of £1,400)	Clifton	..	8	4	6
	431	Matau Township to Mangaoapa Road	,,	..	145	5	0
	432	Poarangi	Whangamomona	..	91	6	4
	433	Punewhakahau Road to Raoraomuku Block (on account of £4,000)	Whangamomona, Stratford, and Patea	..	1,177	6 1 220	15 12 8
	434	Putikituna	Whangamomona	..	234	13	8
	435	Whangamomona to Wanganui River (on account of £5,000)	,,	..	2,872	5	5

TABLE No. 4—*continued.*

STATEMENT showing the NET EXPENDITURE on ROADS, &c.—*continued.*

Vote No.	Item No.	Name of Work.	County.	Electorate.	Net Expenditure.		
		BACKBLOCKS ROADS, ETC.—*continued.*					
		NEW PLYMOUTH ROAD DISTRICT—*continued.*			£	s.	d.
110	436	Ahoroa	Patea	Patea	1,430	18	11
	437	Tawhiti Stream Bridge	,,	,,	96	7	3
	438	Waitotara Valley Road	,,	,,	150	0	0
	440	Supervision	..	..	828	19	1
	441	Miscellaneous works and services, including assistance towards the construction of roads, bridges, tracks, &c.	..	..	144	6	0
		Total—New Plymouth	..	..	29,450	4	8
		WANGANUI ROAD DISTRICT—					
	442	Cross Road (Upper)	Waimarino	Waimarino	99	19	0
	443	Eherua	,,	..	31	0	0
	444	Horopito	,,	..	28	3	7
	445	Kaimatawi	Wanganui	..	127	14	4
	446	Karioi to Rangiwaea	Waimarino	..	26	14	0
	447	Kawautahi	Kaitieke	..	134	16	7
	448	Kokakonui	,,	..	167	7	2
	449	Kokakoriki	,,	..	112	19	0
	451	Mangaetoroa	Waimarino	..	200	0	0
	452	Mangahoe	Kaitieke	..	206	4	8
	453	Mangahowhi	Wanganui	..	159	11	8
	454	Mangahowhi Stream Bridge	,,	..	14	7	6
	455	Mangamahu to Turakina Creek	Rangitikei and Wanganui	..	300	0	0
	456	Manganui-o-te-ao	Waimarino	..	125	2	8
	457	Mangaohutu	Kaitieke	..	203	12	0
	459	Mangaturuturu	Waimarino	,,	12	0	0
	460	Mason's to Raetihi	Wanganui and Waimarino	,,	2,945	16	5
	461	Motete	Waimarino	,,	159	9	0
	462	Murumuru	,,	,,	241	4	10
	464	Otautu	,,	,,	93	5	11
	465	Owhakura	Wanganui	,,	270	0	0
	466	Owhango	Kaitieke	,,	16	2	2
	467	Patua	,,	..	157	18	10
	468	Pipipi	Waimarino	..	61	16	0
	469	Pitangi	Wanganui	..	49	2	11
	470	Pukekaha	Waimarino	..	41	5	1
	471	Raetihi to Ohura	,,	..	18	14	6
	472	Ratamaire	,,	,,	200	0	0
	473	Raupiu	Wanganui	,,	255	18	9
	474	Retaruke	Kaitieke	,,	156	8	4
	475	Retaruke Valley	,,	,,	119	3	6
	476	Retaruke Valley (Upper)	,,	..	62	19	0
	477	Te Komai	Wanganui	,,	410	16	0
	478	Te Rata	Kaitieke	,,	98	13	11
	480	Turakina Valley	Rangitikei	..	195	9	11
	481	Waiaruhe	Wanganui	..	226	13	4
	482	Waikato Bridge (Tokaanu)	East Taupo	..	1,235	7	9
	484	Wanganui River Road (Left Bank)	Wanganui and Waimarino	..	249	11	5
	486	Christie Road Bridge	Waitotara	Patea	28	3	2
	487	Makakaho (Upper Waitotara)	Patea	,,	1,402	18	11
	488	Puao	,,	,,	183	0	0
	489	Purarato Road	,,	,,	314	4	3
	490	Taunoka Road	Waitotara	,,	35	19	5
	493	Papaki	Rangitikei	Oroua	100	0	0
	494	Supervision	..	..	889	10	4
	495	Miscellaneous works and services, including assistance towards the construction of roads, bridges, tracks, &c.	..	..	31	1	3
		Total—Wanganui	..	..	12,200	7	1
		NAPIER ROAD DISTRICT—					
	497	Puanui	Wairoa	Hawke's Bay	109	3	9
	499	Rukumoana to Richmond Road	Hawke's Bay	,,	150	0	0
	501	Miscellaneous works and services, including assistance towards the construction of roads, bridges, tracks, &c.	..	..	24	16	4
		Total—Napier	..	..	284	0	1
		WELLINGTON ROAD DISTRICT—					
	502	Piripiri Block	Dannevirke	Waipawa	0	13	0
	504	Conspicuous Road	Kiwitea	Oroua	19	18	3
	506	Kew	,,	,,	42	18	6
	507	Makino Road	Rangitikei	,,	157	10	0
	508	Makopua	,,	,,	229	2	0

TABLE No. 4—*continued.*

STATEMENT showing the NET EXPENDITURE on ROADS, &c.—*continued.*

Vote No.	Item No.	Name of Work.	County.	Electorate.	Net Expenditure.		
		BACKBLOCKS ROADS, ETC.—*continued.*					
		WELLINGTON ROAD DISTRICT—*continued.*			£	s.	d.
110	511	Pourangaki	Kiwitea	Oroua	29	5	0
	512	Titirangi	,,	,,	154	6	3
	514	Birch Road	Weber and Patangata	Pahiatua	109	16	0
	515	Mangapuaka (North of Tunakore Bridge)	Dannevirke	,,	225	0	0
	517	Maunga Road (extension towards Otanga)	,,	,,	132	12	0
	518	Range Road (South)	Akitio	,,	40	19	9
	520	Tunakore Bridge	Dannevirke	,,	222	15	3
	522	Makoura	Akitio and Masterton	Masterton	217	15	2
	524	Spur Road	Akitio	,,	264	10	5
	525	Sugar-loaf Road	,,	,,	331	6	0
	526	Waioakura	,,	,,	159	10	0
	527	Waiowaka	,,	,,	90	12	2
	528	Waiowaka Stream Bridge and approaches	,,	,,	440	8	2
	530	Pakowai (Anderson's, towards Tinui – Pakowai Road)	Castlepoint	Wairarapa	346	14	9
	534	Waikanae to Upper Hutt	Hutt	Otaki	425	5	3
	536	Supervision			720	6	3
		Total—Wellington			4,361	4	2
		NELSON ROAD DISTRICT—					
	538	Deep Bay to Section 4, Block XII, French Pass S.D.	Sounds	Nelson	6	7	6
	539	Miner River Road	Waimea	,,	218	14	10
	540	Serpentine River Road	,,	,,	149	4	9
	541	Alexander Bluff Road	,,	Motueka	284	18	4
	543	Awaiti to Marahau	Takaka and Waimea	,,	77	19	7
	546	Baton Valley Road	Waimea	,,	75	0	0
	547	Belgrove to Tarndale, via Tophouse	Waimea and Amuri	,,	100	0	0
	549	Big Pokororo River Road	Waimea	,,	200	0	0
	550	Bowron Road	,,	,,	9	16	0
	552	Carlson Road	,,	,,	97	16	0
	555	Clarke River Road	,,	,,	85	16	0
	558	Franklyn Road	,,	,,	14	5	6
	559	Goat Creek Road (Graham River)	,,	,,	150	0	0
	560	Goat Creek Road (Pearse River)	,,	,,	182	16	6
	561	Graham Valley Road (right-hand branch)	,,	,,	199	18	0
	563	Handcock's to Wainui	Takaka	,,	65	0	0
	565	Ironstone Creek Road	,,	,,	27	0	0
	569	Kill Devil Track	,,	,,	200	0	0
	570	Kohaihai to Heaphy	Collingwood	,,	79	18	0
	571	Kokako	Waimea	,,	128	7	9
	572	Lee Valley	,,	,,	173	16	8
	573	Mangarakau	Collingwood	,,	112	10	0
	574	Manu Railway-station to Sherry River Forks	Waimea	,,	229	12	4
	576	Motupiko River Bridge (Korere)	,,	,,	600	0	0
	578	Pearse Valley	,,	,,	210	0	0
	580	Pohara to Awaroa	Takaka	,,	8	0	0
	583	Scott Creek Road	,,	,,	50	0	0
	585	Tadmor to Baton	Waimea	,,	100	0	0
	588	Wairoa River Road (left branch)	,,	,,	36	0	0
	589	Wangapeka River Bridge	,,	,,	287	6	5
	591	Wangapeka Settlement (Sherry Road)	,,	,,	250	0	0
	593	Blackwater Bridge	Murchison	Buller	514	11	0
	594	Buller River Bridge (Gowan Road), (on account of £1,500)	,,	,,	7	4	3
	595	Flat Creek Road	,,	,,	14	0	9
	596	Glencairn to Maruia North Block	,,	,,	106	14	9
	597	Glengarry	,,	,,	194	14	6
	603	Lester Bank deviation	,,	,,	247	1	9
	605	Mangles River bridges	,,	,,	318	17	0
	606	Maruia River Bridge and approaches (Maruia River Road)	,,	,,	91	10	0
	608	Maruia River Road (West Bank)	,,	,,	409	0	6
	610	Maruia South Road	,,	,,	41	10	0
	611	Maruia Valley	,,	,,	117	3	10
	612	Maruia, via Caslani's	,,	,,	256	5	3
	613	Matakitaki River Road (West Bank)	,,	,,	89	9	0
	614	Matakitaki River Bridge (Taylor's)	,,	,,	463	10	4
	615	Matakitaki Valley Road	,,	,,	442	7	10
	616	Matiri River Road (East Bank)	,,	,,	62	5	6
	617	Matiri River Road (West Bank)	,,	,,	40	5	1
	620	Nuggety Creek	,,	,,	170	3	2
	621	O'Donnell Road	,,	,,	43	10	0
	624	Pea Soup Creek Bridge	,,	,,	318	1	0
	626	Rotoiti Lake Road (East Road)	,,	,,	144	2	1

TABLE No. 4—*continued.*

STATEMENT showing the NET EXPENDITURE on ROADS, &c.—*continued.*

Vote No.	Item No.	Name of Work.	County.	Electorate.	Net Expenditure.		
					£	s.	d.
		BACKBLOCKS ROADS, ETC.—*continued.*					
		NELSON ROAD DISTRICT—*continued.*					
110	628	Sheep Pens to Rehu Saddle	Murchison	Buller	90	10	0
	629	Slips Road	,,	,,	120	0	0
	630	Taylor Creek Road	,,	,,	16	1	0
	635	Valley Creek Road extension	,,	,,	63	18	0
	638	Whale Creek Road	,,	,,	79	11	3
	639	Supervision	..	..	570	9	7
	640	Miscellaneous works and services, including assistance towards the construction of roads, bridges, tracks, &c.	..	..	25	0	0
		Total—Nelson	..	..	9,468	1	7
		BLENHEIM ROAD DISTRICT—					
	643	Ronga Valley	Marlborough	Nelson	26	18	0
	644	Tinline Road	,,	,,	1	7	0
	646	Bartlett Creek Road	,,	Wairau	100	0	0
	651	Kenepuru to Endeavour Inlet	Sounds	,,	45	8	7
	652	Mahau Sound	,,	,,	84	9	6
	656	Rock Ferry to Bartlett Creek	Marlborough	,,	149	19	0
	659	Ure to Clarence	Awatere	,,	149	19	9
	662	Hundalee Road (Oaro)	Kaikoura	Hurunui	250	0	0
	663	Kahautara Bluff	,,	,,	775	4	6
	664	Kahautara River Bridge	,,	,,	5	7	6
	665	Kahautara to Conway (Hundalee)	,,	,,	200	0	0
	666	Old Mill Road (Hapuku)	,,	,,	50	0	0
	670	Spey roads	,,	,,	100	0	0
	672	Supervision	..	..	152	2	0
	673	Miscellaneous works and services, including assistance towards the construction of roads, bridges, tracks, &c.	..	..	0	15	9
		Total—Blenheim	..	..	2,091	11	7
		WESTPORT ROAD DISTRICT—					
	674	Blackwater and Granity Creek bridges	Buller	Motueka	57	6	8
	675	Caliari Road (Little Wanganui)	,,	,,	150	0	0
	676	Collingwood–Heaphy Track to Karamea	,,	,,	158	15	0
	677	Little Wanganui to Glasseye	,,	,,	415	2	2
	678	Little Wanganui to Karamea	,,	,,	73	0	0
	679	Mokihinui to Little Wanganui	,,	,,	2,193	1	11
	680	Mokihinui River Bridge approaches	,,	,,	211	7	3
	681	Six-mile Valley Road	,,	,,	96	10	0
	682	Young Road	,,	,,	80	0	0
	685	Supervision	..	..	304	8	6
	686	Miscellaneous works and services, including assistance towards the construction of roads, bridges, tracks, &c.	..	..	5	0	0
		Total—Westport	..	..	3,744	11	6
		GREYMOUTH ROAD DISTRICT—					
	687	Coal Creek Bridge	Inangahua	Buller	301	13	10
	688	Coal Creek Road	,,	,,	244	0	0
	691	Inangahua River Suspension-bridge	,,	,,	233	4	0
	692	Landing Creek Road	,,	,,	250	0	0
	693	Lyell Road to Brown Creek	,,	,,	198	12	8
	694	Barrytown to Brighton	Grey	Grey	66	15	0
	695	Barrytown to Punakaiki	,,	,,	197	0	0
	696	Big River	,,	,,	93	0	0
	697	Lawson's Creek Bridge	,,	,,	350	0	0
	699	Porarari	,,	,,	437	10	0
	700	Punakaiki	,,	,,	228	10	0
	701	Punakaiki Foot-bridge	,,	,,	68	14	8
	702	Rough River Road	,,	,,	365	0	0
	704	Arawata to Cascade	Westland	Westland	75	9	11
	705	Arawata to Barn Bay	,,	,,	150	0	0
	706	Bell Hill to Haupiri	Grey	,,	10	0	0
	707	Bruce Bay Road	Westland	,,	60	0	0
	708	Cameron's Terrace Road	Grey	,,	36	0	0
	709	Cook River to Karangarua	Westland	,,	282	11	6
	712	Gibb Road	..	..	19	12	0
	713	Haast Pass Track	,,	,,	7	13	4
	715	Happy Valley Track	,,	,,	150	0	0
	716	Harris Road	Grey	,,	54	16	3
	717	Hatters to Haupiri	,,	,,	271	0	0
	718	Hermitage to Copland Track	Mackenzie and Westland	,,	899	7	8
	720	Jacob's to Mahitahi Road	Westland	,,	2	10	0
	721	Kokatahi (Upper) to Doughboy	,,	,,	200	18	6

TABLE No. 4—*continued.*

STATEMENT showing the NET EXPENDITURE on ROADS, &c.—*continued.*

Vote No.	Item No.	Name of Work.	County.	Electorate.	Net Expenditure.		
		BACKBLOCKS ROADS, ETC.—*continued.*					
		GREYMOUTH ROAD DISTRICT—*continued.*			£	s.	d.
110	722	Kokiri to Moana	Grey	Westland	217	15	0
	723	Kotuku to Moana	,,	,,	38	10	0
	724	Kotuku	,,	,,	239	0	1
	725	La Fontaine Road and extension	Westland	,,	179	8	7
	728	Murray Creek Bridge	,,	,,	250	0	0
	729	Omoeroa to Waikukupa	,,	,,	601	16	0
	730	Peterson Road and extension	,,	,,	92	14	0
	733	Roto Road Bridge	,,	,,	100	0	0
	735	Stout Creek Bridge	,,	,,	55	16	0
	741	Waitaha Settlement extension	,,	,,	214	18	9
	742	Wall Road extension	,,	,,	207	5	6
	743	Walsh Track (Cook River)	,,	,,	98	0	0
	744	Wataroa Flat Road (widening)	,,	,,	287	17	0
	745	Whale Road	,,	,,	135	3	0
	746	Supervision	..	..	474	13	10
	747	Miscellaneous works and services, including assistance towards the construction of roads, bridges, tracks, &c.	..	..	69	2	6
		Total—Greymouth	..	..	8,515	19	7
		CHRISTCHURCH ROAD DISTRICT—					
	748	Ashley Gorge Road	Oxford and Ashley	Hurunui	1,116	3	0
	749	Conway Gorge Road	Cheviot	,,	708	10	8
	750	Hooker River Bridge and approaches	Mackenzie	Temuka	623	14	7
	754	Lake Tekapo to Omarama	,,	,,	96	15	0
	755	Opawa Bridge	,,	,,	114	0	0
	756	Pukaki to Mount Cook	,,	,,	513	19	5
	757	Supervision	..	..	60	5	0
		Total—Christchurch	..	..	3,233	7	8
		DUNEDIN ROAD DISTRICT—					
	759	Fuchsia Creek Road	Waitaki	Waitaki	300	0	0
	760	Gardner Road	,,	,,	138	17	4
	764	Bagdad Road to Peaks	,,	Oamaru	150	0	0
	765	Macraes to Hyde	Waihemo	,,	200	0	0
	766	Taieri Peak Road	,,	,,	103	12	10
	769	Glade House to Lake Wakatipu	Lake and Wallace	Wakatipu	220	15	1
	773	Pembroke to Glendhu	Lake	,,	100	0	0
	776	Routeburn Valley Road	,,	,,	218	6	0
	779	Supervision	..	..	210	5	6
	780	Miscellaneous works and services, including assistance towards the construction of roads, bridges, tracks, &c.	..	..	154	0	0
		Total—Dunedin	..	..	1,795	16	9
		INVERCARGILL ROAD DISTRICT—					
	782	Waikawa to Haldane	Southland	Clutha	250	0	0
	783	Lake Hauroko Track	Wallace	Wallace	42	12	2
	784	Lillburn to Hauroko	,,	,,	1	5	0
	788	Round Hill to Pahia	,,	,,	153	14	3
	789	Hodgson Road (Kapuka)	Southland	Mataura	103	11	5
	792	Titipua to Brydone	,,	,,	110	11	6
	793	Waimatua	,,	,,	100	0	0
	794	Waimatua to Mokotua	,,	,,	362	1	11
	795	Brown's to Settlers' Reserve	,,	Awarua	119	14	0
	800	Supervision	..	..	154	16	0
		Total—Invercargill	..	..	1,398	6	3
		Vote No. 110—Total for 1912–13	..	..	128,447	16	0
		ROADS TO OPEN UP CROWN LANDS.					
		WHANGAREI ROAD DISTRICT—					
126	7	Pupuke Block	Whangaroa	Bay of Islands	703	5	2
	11	Te Rore Block	Mangonui	,,	426	10	0
	13	Umuwhawha Block	Bay of Islands	,,	1,165	17	4
	18	Whirinaki Block	Hokianga	,,	1,584	7	2
	19	Oue Block	Whangarei	Kaipara	351	4	6
	21	Blocks not specifically provided for	..	..	72	14	10
		Total—Whangarei	..	..	4,393	19	0

TABLE No. 4—*continued.*

STATEMENT showing the NET EXPENDITURE on ROADS, &c.—*continued.*

Vote No.	Item No.	Name of Work.	County.	Electorate.	Net Expenditure.		
		ROADS TO OPEN UP CROWN LANDS—*continued.*					
		AUCKLAND ROAD DISTRICT—			£	s.	d.
126	32	Roto Ngaro Block	Raglan	Raglan	854	3	1
	35	Waimai Block	,,	,,	1,668	12	6
	37	Kawaroa Block	Kawhia	Waikato	144	4	10
	38	Korakonui Block	West Taupo	,,	162	18	10
	40	Oparau Block	Kawhia	,,	703	14	8
	42	Rotongata Block	West Taupo	,,	968	1	0
	43	Tokanui Block	,,	,,	210	9	7
	47	Harihari Block	Kawhia	Taumarunui	321	3	11
	54	Waiwhatawhata Block	Waitomo	,,	322	14	8
	55	Blocks not specifically provided for	..	..	22	14	5
		Total—Auckland	..	..	5,378	17	6
		TAURANGA ROAD DISTRICT—					
	56	Mangorewa-Kaharoa Block	Rotorua	Tauranga	359	14	4
	60	Manawahe Block	Whakatane and Rotorua	Bay of Plenty	1,785	6	5
	62	Tauhara Block	East Taupo	,,	53	7	0
	63	Waitahanui Block	Rotorua	,,	743	9	9
		Total—Tauranga	..	..	2,941	17	6
		GISBORNE ROAD DISTRICT—					
	67	Ngatapa Block	Waikohu	Bay of Plenty	1,794	2	10
	68	Oamaru No. 3 Block	Opotiki	,,	1,630	17	8
	69	Oamaru No. 4 Block	,,	,,	377	0	2
	71	Tahora No. 2 North Block	,,	,,	273	6	0
	74	Whitikau Block	,,	,,	588	6	3
	75	Hangaroa Block	Cook	Gisborne	124	6	3
	77	Waipaoa Block	Wairoa	Hawke's Bay	48	4	1
		Total—Gisborne	..	..	4,836	3	3
		TE KUITI ROAD DISTRICT—					
	79	Ararimu Block	Ohura	Taumarunui	160	0	1
	86	Orekopa Block	Waitomo	,,	276	4	11
	88	Orongomai Block	Ohura	,,	3,512	1	0
	89	Tahuna Block	Waitomo	,,	521	12	11
		Total—Te Kuiti	..	..	4,469	18	11
		NEW PLYMOUTH ROAD DISTRICT—					
	97	Papakauri Block	Awakino	Taumarunui	48	19	0
	99	Taurakawa Block	Stratford	Stratford	883	10	0
	101	Blocks not specifically provided for	..	..	12	4	9
		Total—New Plymouth	..	..	944	13	9
		WANGANUI ROAD DISTRICT—					
	108	Horopito West Block	Waimarino	Waimarino	290	2	10
	109	Kaitieke Township Block	Kaitieke	,,	13	4	0
	110	Kakahi Village Settlement Block	,,	,,	76	17	1
	112	Mangatiti Block	Waimarino	,,	1,954	11	1
	115	Morinui Block	Kaitieke	,,	747	13	3
	116	North Waimarino Block	,,	,,	2,093	16	0
	118	Ohakune No. 2 Block	Waimarino	,,	162	13	8
	121	Owhango Township Extension No. 1 Block	Kaitieke	,,	92	17	3
	122	Rangataua Block	Waimarino	,,	156	7	7
	123	Riariaki Block	Waimarino and Kaitieke	,,	1,853	17	0
	124	Ruatiti Block	Waimarino	,,	2,487	16	9
	125	Taonui – Maraetaua – Punewhakapu Block	Wanganui	,,	950	0	0
	128	Rangitatau Block	Patea and Waitotara	Patea	3,969	1	7
	129	Whakaihuwaka Block	Patea	,,	370	14	2
	130	Blocks not specifically provided for	..	..	64	15	3
		Total—Wanganui	..	..	15,284	7	6

TABLE No. 4—*continued.*

STATEMENT showing the NET EXPENDITURE on ROADS, &c.—*continued.*

Vote No.	Item No.	Name of Work.	County.	Electorate.	Net Expenditure.
		ROADS TO OPEN UP CROWN LANDS—*continued.*			
		NAPIER ROAD DISTRICT—			£ s. d.
126	132	Makaretu Block	Waipawa	Waipawa	154 2 6
	134	Manawaangiangi Block	Patangata	Pahiatua	3,603 18 3
		Total—Napier	..	..	3,758 0 9
		WELLINGTON ROAD DISTRICT—			
	136	Piripiri No. 1 Block	Dannevirke	Waipawa	283 14 7
	137	Te Whitiatara Block	,,	,,	851 3 9
	138	Awarua 1B Block	Rangitikei	Oroua	170 14 5
	143	Kumeti Block	Dannevirke	Pahiatua	168 19 8
	144	Makaretu Village Settlement Block	Pahiatua	,,	131 6 2
	147	Rokai Block	Dannevirke	,,	723 13 7
	152	Blocks not specifically provided for	..	..	11 19 5
		Total—Wellington	..	..	2,341 11 7
		NELSON ROAD DISTRICT—			
	153	Hope Block	Waimea	Motueka	49 16 11
	155	Howard Block	Murchison	Buller	294 12 11
	156	Mangles–Blackwater Block	,,	,,	56 12 0
	159	Mid Maruia Block	,,	,,	149 14 7
	161	Warwick Block	,,	,,	89 5 9
	162	Blocks not specifically provided for	..	..	74 7 1
		Total—Nelson	..	..	714 9 3
		BLENHEIM ROAD DISTRICT—			
	164	Ronga Valley No. 2 Block	Marlborough	Nelson	427 17 9
	167	Blue Mountain Block	Awatere	Wairau	67 1 5
	169	Neutral Spur Block	Marlborough	,,	40 0 0
	170	Blocks not specifically provided for	..	..	20 14 3
		Total—Blenheim	..	..	555 13 5
		WESTPORT ROAD DISTRICT—			
	172	Otumahana Block	Buller	Motueka	458 1 8
	173	Brighton No. 2 Block	,,	Buller	92 8 2
	175	Steeples Block	,,	,,	5 15 0
	176	Blocks not specifically provided for	..	..	6 10 0
		Total—Westport	..	..	562 14 10
		GREYMOUTH ROAD DISTRICT—			
	177	Inangahua Junction Block	Inangahua	Buller	636 4 9
		Total—Greymouth	..	..	636 4 9
		INVERCARGILL ROAD DISTRICT—			
	185	Alton No. 4 Block	Wallace	Wallace	117 14 5
	186	Aparima No. 1 Block	,,	,,	160 0 0
	189	Longwood No. 2 Block	,,	,,	0 9 0
	192	Taunoa Block	,,	,,	69 15 4
	195	Campbelltown Block	Southland	Mataura	123 6 7
	197	Mabel No. 1 Block	,,	,,	62 18 8
	199	Oteramika No. 1 Block	,,	,,	322 3 2
	201	Forest Hill Block	,,	Awarua	162 0 0
	202	Spar Bush Block	,,	,,	114 1 6
		Total—Invercargill	..	..	1,132 8 8
		Vote No. 126—Total for 1912–13	..	..	47,951 0 8

TABLE No. 4—*continued*.

STATEMENT showing the NET EXPENDITURE on ROADS, &c.—*continued*.

Vote No.	Item No.	Name of Work.	County.	Electorate.	Net Expenditure.		
					£	s.	d.
		ROADS TO OPEN UP NATIONAL ENDOWMENT LANDS.					
		AUCKLAND ROAD DISTRICT—					
127	5	Huihuitaha Block	West Taupo	Waikato	126	16	0
		Total—Auckland	..	..	126	16	0
		TAURANGA ROAD DISTRICT—					
	7	Kaituna Block	Rotorua	Bay of Plenty	150	3	9
		Total—Tauranga	..	..	150	3	9
		TE KUITI ROAD DISTRICT—					
	14	Iriwhata Block	Ohura	Taumarunui	91	7	3
	15	Opatu Block	,,	,,	613	15	9
	16	Otunui Block	,,	,,	30	16	1
		Total—Te Kuiti	..	..	735	19	1
		NEW PLYMOUTH ROAD DISTRICT—					
	17	Mohakatino Block	Clifton	Taumarunui	501	7	3
		Total—New Plymouth	..	..	501	7	3
		WANGANUI ROAD DISTRICT—					
	20	Tauakira No. 1 Block	Wanganui	Waimarino	931	13	4
		Total—Wanganui	..	..	931	13	4
		NELSON ROAD DISTRICT—					
	22	Wangamoa Block	Waimea	Nelson	1	5	0
	24	Lee River Extension Block	,,	Motueka	92	8	4
	28	Matakitaki Block	Murchison	Buller	24	0	0
		Total—Nelson	..	..	117	13	4
		GREYMOUTH ROAD DISTRICT—					
	33	Kakapotahi Block	Westland	Westland	125	0	0
		Total—Greymouth	..	..	125	0	0
		Vote No. 127—Total for 1912–13	..	..	2,688	12	9
		CONSOLIDATED FUND.					
		MAINTENANCE AND IMPROVEMENT OF ROADS.					
19	1	Expenses incidental to the maintenance and improvement of roads	..	..	42,248	7	4
		Total of Votes 109, 110, 126, 127, and 19	..	..	430,472	10	9
		Add expenditure for previous year	..	..	*9,089,405	10	8
		Total expenditure to 31st March, 1913	..	..	9,519,878	1	5

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* Includes expenditure for certain years out of Native Land Purchase Account and Lands Improvement Account.—*Vide* Table No 9.

TABLE No. 4—*continued.*

ROADS ON GOLDFIELDS.

	£	s.	d.
Vote No. 111.—Item No. 1.—Assistance towards the construction and repair of roads, &c. ..	637	14	0
	£637	14	0

AUCKLAND.

Coromandel County.

	£	s.	d.
2. Bridles Point Extension ..	150	0	0
4. Cabbage Bay – Cape Colville ..	96	12	4
5. Cabbage Bay – Coromandel ..	100	0	0
7. Cape Colville – Port Charles ..	100	0	0
8. Coromandel – Cabbage Bay Inland Road ..	100	0	0
10. Coromandel–Tererenga ..	50	0	0
11. Coromandel–Waikawa ..	50	0	0
12. Driving Creek – Kikowhakarere ..	150	0	0
13. Gumtown–Tapu ..	100	0	0
14. Jeffcoat's Bay, Port Jackson ..	150	0	0
15. Kapanga Quarry Road ..	100	0	0
16. Kapanga Mine Road (metalling) ..	60	0	0
18. Kennedy Bay – Matamataharakeke ..	179	0	0
19. Kennedy Bay – Settlement ..	100	0	0
21. Kuaotunu – Mercury Bay ..	64	0	0
24. Mercury Bay – Tairua ..	200	0	0
25. Mercury Bay – Whitianga ..	70	0	0
27. Tiki Goldfield Road ..	50	0	0
28. Tiki – Te Koumu ..	150	0	0
29. Tiki–Manaia ..	50	0	0
30. Tokatea – Kennedy Bay ..	150	0	0
31. Waitaia Company's Low-level Road ..	20	0	0
32. Whitianga–Gumtown ..	300	0	0

Thames County.

	£	s.	d.
33. Crosbie Settlement Road ..	50	0	0
37. Hikuwai – Fourth Branch ..	106	0	3
38. Hikuwai–Ohui ..	50	0	0
42. Kauaeranga Valley Road ..	134	0	0
44. Maratoto Road ..	50	0	0
45. Moanataiari Road ..	46	9	4
57. Tairua – Broken Hills – Upper Landing ..	146	3	0
58. Tapu Creek Road ..	15	5	0
66. Waiomo Creek Road ..	17	1	1
67. Waiotahi Creek Road ..	30	0	0
68. Waiotahi Road ..	50	0	0

Thames Borough.

	£	s.	d.
72. Sunbeam Mine Road ..	300	0	0

Ohinemuri County.

	£	s.	d.
73. Bridge Road – Karangahake ..	110	0	0
74. Bridge Road, Waikino ..	87	0	0
75. Cadman Road (Waikino–Waitekauri) ..	230	0	0
76. Crown Battery and Hill Road ..	100	0	0
78. Farrelly Road ..	50	0	0
79. Franklin Road ..	38	13	0
81. Hill Road – Talisman Mine ..	200	0	0
82. Hoununga Road ..	7	0	0
84. Jubilee Road – Maoriland Mine ..	150	0	0
86. Karangahake Bridge – Railway-station (£1 for £1) ..	44	10	0
87. Karangahake School of Mines Road ..	50	0	0
88. Komata Creek Road (£51, £1 for £1) ..	143	10	0
89. Komata–Maratoto ..	49	10	0
91. Main Road – Butler's Creek (£1 for £1) ..	100	0	0
94. Maratoto Road ..	264	3	8
95. Mill Road (£1 for £1) ..	100	0	0
96. Ngatitangata Road (£1 for £1) ..	20	0	0
97. Ohinemuri Bridge at Karangahake (£1 for £1) ..	1,000	0	0
99. Old Tauranga Road ..	171	0	0
100. Owen's Road, Waikino ..	38	0	0

TABLE No. 4—*continued.*

ROADS ON GOLDFIELDS—*continued.*

AUCKLAND—*continued.*

Ohinemuri County—continued.

	£	s.	d.
101. Paeroa – Hikutaia Road – Robinson's	40	0	0
102. Paeroa–Netherton	300	0	0
103. Paeroa–Rotokohu	100	0	0
104. Paeroa – Te Aroha	447	0	0
105. Paeroa–Waitoa	145	0	0
106. Pevereal's Road	100	0	0
107. Princes Road, Waikino	43	10	0
108. Rahu Road	140	0	0
110. Robinson's Road	15	0	0
111. Rotokohu Road	19	5	8
112. School Road, Karangahake	100	0	0
113. Scotchman's Gully Road	50	0	0
114. Talisman Mine – Crown	75	16	6
118. Tui – Pick-and-Dish	90	0	0
122. Waihi–Whangamata	192	0	0
123. Waihi–Wharekiraupunga	100	0	0
124. Waikino–Waitekauri	100	0	0
125. Waitekauri – Golden Cross	200	0	0
126. Waitekauri–Durbar	94	0	0
128. Waverley Road, Karangahake	40	0	0
129. Wharekiraupunga Road	75	0	0
Piako County.			
132. Waiorongomai Lower Horse-track	65	16	6
	£9,020	6	4

MARLBOROUGH.

Pelorus Road Board.

	£	s.	d.
134. Canvastown Track	68	0	0
136. Deep Creek, Wakamarina – Dead Horse Creek	50	0	0
Wairau Road Board.			
140. Top Valley Road	200	0	0
	£318	0	0

NELSON.

Collingwood County.

	£	s.	d.
141. Aorere (Upper) Road	66	2	0
144. Coal Creek Bridge	350	0	0
145. Kaituna–Patarau	220	12	6
146. Lunatic Hill Road	77	0	0
149. Tamatea–Ferntown	14	0	9
Takaka County.			
151. Barron's Flat Extension	200	0	0
152. Gridiron Creek Track	109	15	0
153. Long Plain Road Extension	100	0	0
154. Pohara–Tarakohe	162	10	0
155. Table Land Track	150	0	0
156. Takaka – Collingwood Inland Road	98	0	0
157. Waitui – Barron's Flat	50	0	0
Waimea County.			
158. Pokororo Footbridge	150	0	0
159. Skeet River Road	94	18	0
160. Wangapeka–Baton	210	0	0
161. Wangapeka Valley – Chandler's – Flannagan's	948	17	0
Buller County.			
162. Arapito – Karamea Gorge – Bennett's	150	0	0
163. Coal Creek Bridge	332	10	8
164. Fenian Creek Road	119	5	0
165. Gilbank Road	80	5	0

TABLE No. 4—*continued.*

ROADS ON GOLDFIELDS—*continued.*

NELSON—*continued.*

Buller County—continued.	£	s.	d.
167. Granite Creek Road	256	5	0
169. Johnson's Creek Bridge	100	0	0
170. Karamea Mud Flat	150	0	0
173. Mokihinui – Little Wanganui River Road	1,200	8	0
174. Mokihinui–Ngakawau	223	7	0
175. Mokihinui River Bridge – mouth of Mokihinui River	60	0	0
176. Mokihinui River Road	38	7	0
181. Seddonville Roads	200	0	0
184. Wanganui–Wangapeka	183	5	0
185. Wanganui – Wangapeka Road Extension – Mount Radiant	172	0	0
186. Addison's–Charleston	100	0	0
188. Bins Road – Ngakawau	11	0	0
189. Brighton–Caves	200	0	0
190. Brighton–Richard's	479	5	0
191. Buller Bridge – Carter's	142	18	3
192. Buller River Dredges Road	35	0	0
193. Bullock Creek Track	50	0	0
196. Cedar Creek Road	87	0	0
197. Channel Flat – Mackley's and Bridge	134	1	8
198. Charleston–Four-mile	100	0	0
199. Coalbrookdale Road	81	0	0
205. Denniston Road (widening)	100	0	0
206. Denniston and Coalbrookdale – Sanitation	200	0	0
208. East Road, Denniston	100	0	0
213. Fox's River Bridge	100	0	0
216. Granity Creek Bridges (Millerton Roads)	100	0	0
217. Harben Road	50	0	0
218. Harney Road	50	0	0
220. Hector Roads	219	2	0
224. Joachim's Road (Denniston–Hospital)	62	8	0
228. Lyell–Mokihinui	115	0	0
229. Mangatini Road Extension	74	10	0
237. Mears Road	100	0	0
239. Millerton Township	150	0	0
244. New Creek Bridge (New Creek Road)	100	0	0
245. Ngakawau – Stockton Mine (£1 for £1)	52	0	0
247. Nile Bridge, Charleston	90	7	6
248. Nile Valley Road Extension	150	0	0
249. Nine-mile Beach – Totara Bridge	249	10	0
254. Outlet – Road Birchfield	200	0	0
268. Shamrock Lead Mine Road	300	0	0
271. Specimen Creek Road Extension	73	17	6
274. Summerlea Road	150	0	0
279. Tramway Road, Denniston	50	0	0
280. Utopia Road	100	0	0
285. Victory – Mahr's Reefs Road, Lyell (on account)	174	15	0
286. Waimangaroa–Barrowman's	90	0	0
287. Waimangaroa–Fairdown	165	0	0
288. Waimangaroa–Waratea	178	0	0
Murchison County.			
222. Horse Terrace – Hunter's	71	15	0
232. Maruia Road, via Caslani's	196	0	0
253. O'Rorke's – Horse Terrace	61	0	0
255. Owen Junction – Battery-site	145	2	9
261. Rappahannoc Bridge	63	0	5
262. Rappahannoc Creek Track (widening) (on account)	177	18	0
276. Taff's Bank, near Six-mile Bridge (regrading)	100	0	0
Inangahua County.			
201. Cronadun–Capleston	139	17	6
203. Crushington Bridge and approaches at overflow	399	19	11
211. Fiery Cross Road	179	1	6
242. Murray Creek Bridges	150	0	0
243. Murray Creek Road	244	17	7

TABLE No. 4—*continued.*

ROADS ON GOLDFIELDS—*continued.*

NELSON—*continued.*

Inangahua County—continued.

	£	s.	d.
269. Soldiers Road, Bonanza – Auld's Creek Track	150	0	0
293. Big River – St. George Mine	87	11	8
295. Blackwater–Waiuta	22	10	10
305. Hukarere – Blackwater Company's Battery-site (on account of £5,000)	819	10	6
307. Main Grey Road – Lloyd's, Blackwater	91	0	0
312. Progress Junction – Merrijigs	500	0	0
313. Progress Junction – Slab Hut Creek	226	11	9
318. Slab Hut Creek – Big River	498	12	6
369. Waiuta – Big River Road	200	0	0
370. Waiuta Township Drainage (£1 for £1)	27	0	0
371. Waiuta Township Roads	100	0	0
372. Waiuta – Snowy Creek	200	0	0
	£16,083	12	9

WESTLAND.

	£	s.	d.
Brunner Borough.			
296. Brunner–Blackball	118	18	11
Grey County.			
298. Cobden–Brighton	312	0	0
301. Deep Creek Bridge (on account)	176	1	3
302. Ford's Creek Bridge	200	0	0
308. McLean's Creek Track and Road	56	16	0
310. No Town Creek Bridge	150	0	0
315. Saltwater Bridge, Old Marsden Road	263	9	0
321. Upper Moonlight Bridge	297	4	8
329. Brandy Jacks – Orwell Creek Track	200	0	0
331. Cameron's Road Extension	150	0	0
332. Cameron's Track	100	0	0
339. Grey – Dungaville Bridge; Marsden Road	54	0	0
343. Kotuku Railway-station – Oilfield (on account)	700	0	0
347. Molloy's Creek Bridge (on account)	111	10	0
353. No Town Creek Bridge (reconstruction)	150	0	0
355. Payne's Gully Track	377	10	11
374. Westbrook Road (deviation)	2,105	3	7
Westland County.			
324. Adair's Road	85	0	0
326. Awatuna Road	46	7	11
327. Back Creek Road	101	11	0
330. Browning's Pass Track (deviation and repairs)	221	5	0
333. Eel Creek Track protection	50	13	0
334. Forks – Canoe Point	228	15	0
335. Fourth Terrace – Awatuna Track	64	0	0
336. Gillam's Gully Road Extension and Overflow Bridge	114	0	0
338. Goldsborough Deviation (£1 for £1)	78	16	0
340. Hau Hau Road	72	0	0
341. Hokitika Boundary Road	27	13	11
344. Lamplough Track (widening)	150	0	0
345. Lang's Road	212	2	6
351. No. 3 Channel Road	140	0	0
354. Okarito – Forks Road and Track	30	16	0
361. Seddon's Terrace Branch Road	170	0	0
362. Shennandoah Creek Bridge	100	0	0
364. Stafford Tracks	48	9	0
365. Styx Track	225	6	10
366. Teal Track	22	10	0
367. Toaroha Track	92	3	6
368. Waimea Creek Bridge Road	85	14	0
376. Whitcombe Valley Track	35	4	0
377. Wilberforce Track	24	17	6
Ross Borough.			
359. Ross – Railway-station, Ross	80	11	4
	£8,030	10	10

TABLE No. 4—*continued.*

ROADS ON GOLDFIELDS—*continued.*

CANTERBURY.

Mackenzie County.	£	s.	d.
378. Opawa River Traffic-bridge near Albury Coal-pit (£2 for £1)	104	0	0
	£104	0	0

OTAGO.

Tuapeka County.	£	s.	d.
382. Lawrence to McIntyre's	100	0	0
385. Island Block (£1 for £1)	50	0	0
389. Moa Flat (£1 for £1)	100	0	0
391. Rae's Junction – Island Block (£1 for £1)	40	0	0
Taieri County.			
383. Railway-station – Mine, Barewood	130	0	0
Vincent County.			
384. Clyde – Tuapeka County boundary	100	0	0
386. Lawrence to Clyde	55	0	0
396. Cromwell–Nevis	54	10	0
397. Cromwell–Clyde	200	0	0
399. Cromwell–Wanaka	434	11	0
Lake County.			
394. Blue Slip, Skipper's	53	19	7
395. Cardrona Coal-pit Road	48	17	10
405. Moke Creek Track	50	0	0
408. Queenstown – Gentle Annie	50	0	0
412. Shotover Valley Road	200	0	0
	£1,666	18	5

SOUTHLAND.

Wallace County.	£	s.	d.
422. Ruahine–Beach	48	15	0
Southland County.			
414. Waikaia Bridge (Waiparu) (£2 for £1)	501	6	0
428. Longbeach Road	150	0	0
429. Longbeach Road – Wallace Beach (£1 for £1)	200	0	0
	£900	1	0

	£	s.	d.
Expenditure for year ended 31st March, 1913	36,761	3	4
Expenditure for previous years	936.346	13	6
Total expenditure to 31st March, 1913, on Roads on Goldfields	£973,107	16	10

Development of Goldfields.—Table No. 5.

STATEMENT showing the EXPENDITURE for WATER-RACES on GOLDFIELDS out of Public Works Fund to 31st March, 1913, and the LIABILITIES on that Date.

LOCALITY AND NAME OF RACE.	EXPENDITURE.					LIABILITIES.				Total Expenditure and Liabilities.	LOCALITY AND NAME OF RACE.
	Survey and Construction, 1870–1912.	Grants, Subsidies, 1870–1912.	Survey and Construction 1912–1913.	Grants, Subsidies, 1912–1913.	Totals.	Authorities on Construction.	Authorities on Grants, Subsidies.	Contracts.	Totals.		
NORTH ISLAND.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	NORTH ISLAND.
AUCKLAND PROVINCIAL DISTRICT—											AUCKLAND PROVINCIAL DISTRICT—
Thames	80,708 19 3	..	..	..	80,708 19 3	..	..	..	..	80,708 19 3	Thames.
Tairua Water-race	..	34 5 4	..	..	34 5 4	..	..	..	..	34 5 4	Tairua Water-race.
Compensation, Thames Water-race	..	1,250 0 0	..	..	1,250 0 0	..	..	..	..	1,250 0 0	Compensation, Thames Water-race.
R. Kelly's water-race, Mata ..	..	40 0 0	..	..	40 0 0	..	..	..	..	40 0 0	R. Kelly's water-race, Mata.
Kuaotunu Sludge-channel ..	..	230 0 0	..	..	230 0 0	..	..	..	..	230 0 0	Kuaotunu Sludge-channel.
Drain, Te Aroha West	..	61 0 0	..	..	61 0 0	..	..	..	..	61 0 0	**Drain, Te Aroha West.**
	80,708 19 3	1,615 5 4	..	..	82,324 4 7	..	..	..	..	82,324 4 7	
MIDDLE ISLAND.											MIDDLE ISLAND.
WESTLAND PROVINCIAL DISTRICT—											WESTLAND PROVINCIAL DISTRICT—
Subsidies—											*Subsidies—*
Hohonu	3 7 0	1,955 12 1	..	..	1,958 19 1	..	..	..	..	1,958 19 1	Hohonu.
Hibernian	12 5 8	1,992 14 8	..	..	2,005 0 4	..	..	..	..	2,005 0 4	Hibernian.
New River	21 5 0	3,496 0 3	..	..	3,517 5 3	..	..	..	..	3,517 5 3	New River.
Kanieri	1 5 6	10,310 18 4	..	..	10,312 3 10	..	..	..	..	10,312 3 10	Kanieri.
Rimu Drainage-tunnel ..	191 19 6	32 0 0	..	..	223 19 6	..	..	..	..	223 19 6	Rimu Drainage-tunnel.
Ross Sludge-channel	..	1,554 10 6	..	..	1,554 10 6	..	..	..	..	1,554 10 6	Ross Sludge-channel.
Kumara Sludge-channel No. 2	..	2,762 17 2	..	..	2,762 17 2	..	..	..	..	2,762 17 2	Kumara Sludge-channel No. 2.
Kumara Sludge-channel No. 3	75 0 0	1,199 7 6	..	..	1,274 7 6	..	..	..	..	1,274 7 6	Kumara Sludge-channel No. 3.
Kumara No. 4 Main Tail-race ..	..	1,151 10 8	..	..	1,151 10 8	..	..	..	..	1,151 10 8	Kumara No. 4 Main Tail-race.
Kumara No. 5 Main Tail-race ..	..	5,666 14 11	..	..	5,666 14 11	..	..	..	..	5,666 14 11	Kumara No. 5 Main Tail-race.
Trustees Main Tail-race, Waimea	..	2,294 6 8	..	..	2,294 6 8	..	..	..	..	2,294 6 8	Trustees Main Tail-race, Waimea.
Branch Tail-race to No. 4 Channel, Payne and party	..	100 0 0	..	..	100 0 0	..	..	..	..	100 0 0	Branch Tail race to No. 4 Channel, Payne and party.
Kelly's Terrace Tunnel ..	..	2,587 13 0	..	..	2,587 13 0	..	..	..	..	2,587 13 0	Kelly's Terrace Tunnel.
Quinn's Creek Water-race (purchase)	..	70 0 0	..	..	70 0 0	..	..	..	..	70 0 0	Quinn's Creek Water-race (purchase).
Raising dam, Loop-line ..	1,125 16 6	..	..	..	1,125 16 6	..	..	..	..	1,125 16 6	Raising dam, Loop-line.
Ngahere–Blackball	..	200 0 0	..	..	200 0 0	..	..	..	..	200 0 0	Ngahere–Blackball.
Donnelly's Creek Tail-race ..	..	444 4 5	..	..	444 4 5	..	..	..	..	444 4 5	Donnelly's Creek Tail-race.
Purchase of Byrne, O'Hallahan, and Murdoch's water-rights	..	35 0 0	..	..	35 0 0	..	..	..	..	35 0 0	Purchase of Byrne, O'Hallahan, and Murdoch's water-rights.
Jones Creek Storm-channel ..	100 0 0	325 0 0	..	..	425 0 0	..	..	..	..	425 0 0	Jones Creek Storm-channel.
Back Creek Water-race ..	330 1 0	..	..	..	330 1 0	..	..	..	..	330 1 0	Back Creek Water-race.
Ford and party, Park Terrace ..	..	108 18 0	..	..	108 18 0	..	..	..	..	108 18 0	Ford and party, Park Terrace.
McConnon and Garner, Dilmanstown	..	300 0 0	..	..	300 0 0	..	..	..	..	300 0 0	McConnon and Garner, Dilmanstown.
Murchie and Benyon, Kumara	..	150 0 0	..	..	150 0 0	..	..	..	..	150 0 0	Murchie and Benyon, Kumara.
Government Works—											*Government Works—*
Waimea–Kumara	195,850 9 4	..	..	62 15 1	195,913 4 5	..	..	..	..	195,913 4 5	Waimea–Kumara.
Wainihinihi Water-race ..	14,152 17 7	..	..	..	14,152 17 7	..	..	..	..	14,152 17 7	Wainihinihi Water-race.
Mikonui	25,927 4 6	..	..	..	25,927 4 6	..	..	..	..	25,927 4 6	Mikonui.
NELSON PROVINCIAL DISTRICT—											NELSON PROVINCIAL DISTRICT—
Government Works—											*Government Works—*
Nelson Creek	90,722 10 8	..	..	..	90,722 10 8	..	..	..	..	90,722 10 8	Nelson Creek.
Napoleon Hill	257 16 7	..	..	..	257 16 7	..	..	..	..	257 16 7	Napoleon Hill.
Argyle (Charleston)	15,951 15 3	150 0 0	..	..	16,101 15 3	..	..	..	..	16,101 15 3	Argyle (Charleston).
Black's Point	244 9 0	..	..	..	244 9 0	..	..	..	..	244 9 0	Black's Point.
Carried forward ..	344,968 3 1	36,887 8 2	..	62 15 1	381,918 6 4	..	..	..	..	381,918 6 4	

Development of Goldfields.—Table No. 5—*continued*.

STATEMENT showing the EXPENDITURE for WATER-RACES on GOLDFIELDS out of Public Works Fund to 31st March, 1913, and the LIABILITIES on that Date—*continued*.

LOCALITY AND NAME OF RACE.	EXPENDITURE.					LIABILITIES.				Total Expenditure and Liabilities.	LOCALITY AND NAME OF RACE.
	Survey and Construction, 1870–1912.	Grants, Subsidies, 1870–1912.	Survey and Construction 1912–1913.	Grants, Subsidies, 1912–1913.	Totals.	Authorities on Construction.	Authorities on Grants, Subsidies.	Contracts.	Totals.		
	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	
Brought forward	344,968 3 1	36,887 8 2	..	62 15 1	381,918 6 4	..	..	..	..	381,918 6 4	
MIDDLE ISLAND—*continued*.											MIDDLE ISLAND—*continued*.
NELSON PROVINCIAL DISTRICT—*ctd.*											NELSON PROVINCIAL DISTRICT—*ctd.*
Subsidies—											*Subsidies*—
Jones, Baxter, and party, water-race from Roaring Meg	..	800 0 0	..	..	800 0 0	..	..	..	..	800 0 0	Jones, Baxter, and party, water-race from Roaring Meg.
Bell Hill Co.'s Race	..	500 0 0	..	..	500 0 0	..	..	..	..	500 0 0	Bell Hill Co.'s Race.
Randall Creek Water-race ..	322 18 2	..	..	..	322 18 2	..	..	..	..	322 18 2	Randall Creek Water-race.
Wills and party, water-race at Sulky Gully	..	218 0 0	..	..	218 0 0	..	..	..	..	218 0 0	Wills and party, water-race at Sulky Gully.
OTAGO PROVINCIAL DISTRICT—											OTAGO PROVINCIAL DISTRICT—
Subsidies—											*Subsidies*—
Arrow	..	612 10 0	..	..	612 10 0	..	..	..	..	612 10 0	Arrow.
Beaumont and Tuapeka ..	4 6 2	640 0 0	..	..	644 6 2	..	..	..	..	644 6 2	Beaumont and Tuapeka.
Carrick Range	..	9,249 13 1	..	..	9,249 13 1	..	..	..	..	9,249 13 1	Carrick Range.
Mount Pisgah	..	200 0 0	..	..	200 0 0	..	..	..	..	200 0 0	Mount Pisgah.
Lawrence Drainage-channel ..	..	3,092 19 0	..	..	3,092 19 0	..	..	..	..	3,092 19 0	Lawrence Drainage-channel.
Ophir Tail-race	..	1,150 0 0	..	..	1,150 0 0	..	..	..	..	1,150 0 0	Ophir Tail-race.
Muddy Creek Channel ..	..	850 0 0	..	..	850 0 0	..	..	..	..	850 0 0	Muddy Creek Channel.
St. Bathan's	..	2,314 4 0	..	..	2,314 4 0	..	..	..	..	2,314 4 0	St. Bathan's.
Maerewhenua	1,065 0 0	..	..	..	1,065 0 0	..	..	..	..	1,065 0 0	Maerewhenua.
Artesian wells, Maniototo ..	20 0 0	..	..	..	20 0 0	..	..	..	..	20 0 0	Artesian wells, Maniototo.
Improving water-supply, Oamaru	1,600 7 2	..	..	..	1,600 7 2	..	..	..	..	1,600 7 2	Improving water-supply, Oamaru.
Mountain Hut Water-race ..	4,879 12 0	..	..	..	4,879 12 0	..	..	..	..	4,879 12 0	Mountain Hut Water-race.
Government Works—							..				*Government Works*—
Mount Ida	73,832 10 6	..	..	..	73,832 10 6	..		..	..	73,832 10 6	Mount Ida.
Waipori	11,263 1 0	..	..	..	11,263 1 0	..	..	..	..	11,263 1 0	Waipori.
Alexandra (purchase) ..	16,956 7 3	..	..	..	16,956 7 3	..	..	..	..	16,956 7 3	Alexandra (purchase).
CANTERBURY PROVINCIAL DISTRICT—											CANTERBURY PROVINCIAL DISTRICT—
Subsidy—											*Subsidy*—
Ninety-mile Beach Water-race	65 6 7	..	..	..	65 6 7	..	..	..	..	65 6 7	Ninety-mile Beach Water-race.
SOUTHLAND PROVINCIAL DISTRICT—											SOUTHLAND PROVINCIAL DISTRICT—
Subsidy—											*Subsidy*—
Round Hill	..	133 19 4	..	..	133 19 4	..	..	..	..	133 19 4	Round Hill.
GENERAL—											GENERAL—
Increased water-supply ..	530 4 0	100 0 0	..	..	630 4 0	..	..	..	..	630 4 0	Increased water-supply.
DEPARTMENTAL—											DEPARTMENTAL—
Salaries, travelling, advertising, &c.	6,763 9 6	..	..	..	6,763 9 6	..	..	..	..	6,763 9 6	Salaries travelling, advertising, &c.
TOTALS	462,271 5 5	56,748 13 7	..	62 15 1	519,082 14 1	..	..	..	..	519,082 14 1	TOTALS.
SUMMARY.											SUMMARY.
NORTH ISLAND	80,708 19 3	1,615 5 4	..	..	82,324 4 7	..	..	..	..	82,324 4 7	NORTH ISLAND.
MIDDLE ISLAND	462,271 5 5	56,748 13 7	..	62 15 1	519,082 14 1	..	..	..	..	519,082 14 1	MIDDLE ISLAND.
TOTALS	542,980 4 8	58,363 18 11	..	62 15 1	601,406 18 8	..	..	..	..	601,406 18 8	TOTALS.

Development of Goldfields.—Table No. 5a.

STATEMENT showing ASSISTANCE towards PROSPECTING, and MISCELLANEOUS SERVICES, out of Public Works Fund to 31st March, 1913, and the LIABILITIES on that Date.

—	Total Expenditure to 31st March, 1912.	Net Expenditure during Twelve Months ended 31st March, 1913.	Total Net Expenditure to 31st March, 1913.	Liabilities on 31st March, 1913.	Total Net Expenditure and Liabilities.
	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
Assistance towards prospecting	41,217 5 9*	..	41,217 5 9	..	41,217 5 9
Oil boring, Kotuku	207 10 0	..	207 10 0	..	207 10 0
Purchase and expenses of diamond and other drills	13,334 9 3	2,708 13 6	16,043 2 9	..	16,043 2 9
Prospecting deep levels, Thames—					
Deep Levels crosscut subsidy	..	6,000 0 0	6,000 0 0	..	6,000 0 0
Queen of Beauty shaft subsidy	25,000 0 0	..	25,000 0 0	..	25,000 0 0
Inspector's fee	500 0 0	..	500 0 0	..	500 0 0
Cost and expenses, purchase, plant, &c.	7,070 5 2	27 13 8	7,097 18 10	..	7,097 18 10
Lowering water, Queen of Beauty shaft	400 0 0	..	400 0 0	..	400 0 0
Deepening and unwatering Queen of Beauty shaft	9,205 16 6	..	9,205 16 6	..	9,205 16 6
Prospecting deep levels, Ross	15,019 4 4	..	15,019 4 4	..	15,019 4 4
Purchase of Cassrell's and Bennett's leaseholds, Paeroa	2,250 0 0	..	2,250 0 0	..	2,250 0 0
Compensation proclamation of rivers	42,741 3 5	182 19 0	42,924 2 5	..	42,924 2 5
Water-conservation—					
Reports on Coromandel Harbour and Kuaotunu Sludge-channel	80 12 6	..	80 12 6	..	80 12 6
Engineer's salary and expenses	3,219 0 2	..	3,219 0 2	..	3,219 0 2
Reports on Ross Flat	284 10 8	..	284 10 8	..	284 10 8
Eweburn Reservoir	16,459 15 10	..	16,459 15 10	..	16,459 15 10
Gimmerburn Creek embankment	211 12 3	..	211 12 3	..	211 12 3
Greenland Swamp Dam	39 12 0	..	39 12 0	..	39 12 0
Home Gully Dam	1,028 0 6	..	1,028 0 6	..	1,028 0 6
Manorburn Creek weir	457 1 7	..	457 1 7	..	457 1 7
Compensation, Owen Roberts	75 0 0	..	75 0 0	..	75 0 0
Compensation, kin of late R. Bellamy	..	60 0 0	60 0 0	..	60 0 0
Telephone-line, Bannockburn to Nevis	50 0 0	..	50 0 0	..	50 0 0
Resumption of land	862 7 0	..	862 7 0	..	862 7 0
Water-supplies for Mining Townships—					
Waikino	2,568 0 0	..	2,568 0 0	..	2,568 0 0
Waitekauri	445 2 5	..	445 2 5	..	445 2 5
Karangahake	607 6 5	..	607 6 5	..	607 6 5
Mackaytown	351 0 0	..	351 0 0	..	351 0 0
Clyde	1,121 13 2	..	1,121 13 2	..	1,121 13 2
Alexandra	600 0 0	..	600 0 0	..	600 0 0
Ophir	148 10 0	1 9 0	149 19 0	..	149 19 0
Ohinemuri River silting	3 12 0	..	3 12 0	..	3 12 0
Thames Drainage Board contribution	1,000 0 0	..	1,000 0 0	..	1,000 0 0
Kumara Water-race extension across Teremakau River	19,655 9 11	1,540 7 2	21,195 17 1	..	21,195 17 1
Waimumu Main Tail-race	1,450 6 3	..	1,450 6 3	..	1,450 6 3
Charlton Creek Main Tail-race	408 7 1	..	408 7 1	..	408 7 1
Advances to companies	8,200 0 0	..	8,200 0 0	..	8,200 0 0
Protective works, Stafford	286 5 5	60 1 3	346 6 8	..	346 6 8
Dam, Bow Bell Flat	270 0 0	..	270 0 0	..	270 0 0
	216,828 19 7	10,581 3 7	227,410 3 2	..	227,410 3 2
Less Recovery on Account of Expenditure of Previous Years—					
Johnston's dam, Bow Bell Flat	..	..	15 0 0	..	15 0 0
Muddy Terrace Sluicing Company	..	..	1,000 0 0	..	1,000 0 0
			1,015 0 0		1,015 0 0
Totals	216,828 19 7	10,581 3 7	226,395 3 2	..	226,395 3 2

* Assistance towards prospecting now paid out of Consolidated Fund.

TABLE No. 6.

STATEMENT showing the EXPENDITURE on TELEGRAPHS out of Public Works Fund to 31st March, 1913, and the Liabilities on that Date.

Line.	Expenditure during Twelve Months ended 31st March, 1913.		
	Expenditure	Material issued from Stores.	Total Cost during the Year.
	£ s. d.	£ s. d.	£ s. d.
Telephone Exchanges—			
Ashburton	245 1 2	929 3 0	1,174 4 2
Auckland	16,285 12 10	21,982 16 10	38,268 9 8
Blenheim	2,591 19 3	1,815 0 4	4,406 19 7
Christchurch	6,417 11 7	4,285 3 11	10,702 15 6
Dannevirke	139 12 1	228 3 2	367 15 3
Dunedin	4,168 15 4	5,757 11 1	9,926 6 5
Feilding	940 2 4	584 10 7	1,524 12 11
Gisborne	1,748 9 10	3,163 19 6	4,912 9 4
Greymouth	115 17 0	234 12 2	350 9 2
Hamilton	377 3 2	762 11 5	1,139 14 7
Hawera	708 0 3	1,186 8 11	1,894 9 2
Hokitika	19 6 11	221 17 8	241 4 7
Invercargill	3,069 6 7	1,898 16 1	4,968 2 8
Levin	73 11 9	34 0 6	107 12 3
Masterton	2,394 5 6	3,690 14 11	6,085 0 5
Napier	2,695 15 1	5,042 8 5	7,738 3 6
Nelson	570 15 4	529 17 8	1,100 13 0
New Plymouth	505 15 7	1,104 1 6	1,609 17 1
Oamaru	77 17 0	614 6 9	692 3 9
Pahiatua	224 17 0	337 19 9	562 16 9
Palmerston North	597 12 8	1,155 6 8	1,752 19 4
Rotorua	62 14 9	155 19 7	218 14 4
Stratford	224 17 2	167 2 5	391 19 7
Thames	347 6 3	784 13 2	1,131 19 5
Timaru	1,962 19 3	2,237 2 11	4,200 2 2
Wanganui	2,419 17 0	3,255 0 3	5,674 17 3
Wellington	8,478 14 4	4,488 2 11	12,966 17 3
Westport	15 16 10	170 13 11	186 10 9
Whangarei	266 11 11	433 5 0	699 16 11
Total exchanges	57,746 5 9	67,251 11 0	124,997 16 9
New Wires—			
Upper Oruaiti Extension	38 6 0	11 2 9	49 8 9
Lake Ohia Extension	59 1 9	..	59 1 9
Awanui–Waipapakauri–Waiharara–Kaimaumau	107 9 6	21 19 9	129 9 3
Awanui Wireless	12,775 10 8	..	12,775 10 8
Awanui–Kaitara (metallic circuit)	..	6 6 0	6 6 0
Mangatangirau Extension	59 17 3	12 9 11	72 7 2
Mangonui–Awanui	200 7 1	19 19 8	220 6 9
Kaurinui Telephone Extension	..	4 2 11	4 2 11
Kohumaru Extension	51 1 9	..	51 1 9
Matauri Bay – Otoroa Extension	179 12 6	36 4 9	215 17 3
Auckland–Pupuke	33 17 6	..	33 17 6
Kerikeri – Pureroa Extension	152 4 11	..	152 4 11
Broadwood–Whakarapa	107 12 8	40 14 6	148 7 2
Paponga Telephone-office	..	1 0 1	1 0 1
Haruru Telephone-office	0 6 6	..	0 6 6
Taikawhana Telephone-line	..	32 6 11	32 6 11
Puketona Telephone-office	1 14 0	..	1 14 0
Kawakawa–Ohaeawai	35 5 4	36 5 8	71 11 0
Tanekaka Extension	156 18 11	..	156 18 11
Whangarei–Kawakawa	2 17 2	..	2 17 2
Otonga Telephone-office	..	3 14 11	3 14 11
Dargaville–Whangarei	1,201 8 5	604 11 9	1,806 0 2
Rukawai–Tarunui–Waiparera	1 10 11	..	1 10 11
Mangapai Wharf Telephone Extension	1 1 6	..	1 1 6
Dargaville – Te Kopuru – Tatarariki (metallic circuit)	92 4 7	3 16 0	96 0 7
Okonga Telegraph-office	4 0 3	..	4 0 3
Pukapuka – Warkworth (metallic circuit)	70 16 0	..	70 16 0
Warkworth – Mullet Point – Te Kapa Extension	29 19 6	..	29 19 6
Pohuehue Telegraph-office	7 11 0	..	7 11 0
Mangakura–Glorit	45 2 4	..	45 2 4
Auckland–Waiwera	174 16 6	11 18 10	186 15 4
Dairy Flat Telephone Extension	69 16 7	49 4 1	119 0 8
Glenfield Extension	15 14 0	4 1 10	19 15 10
Kennedy's Bay Telephone Extension	1 13 6	23 9 0	25 2 6
Wireless, Auckland Post-office	142 9 3	..	142 9 3
St. Heliers Wireless	19 9 2	..	19 9 2
Te Atatu Telephone Extension	88 12 9	4 1 7	92 14 4
Edendale North Telephone Extension	16 4 0	31 5 1	47 9 1
Mt. Albert – Waikumete (metallic circuit)	9 8 2	27 10 7	36 18 9
Waikumete–Karekare	552 10 7	..	552 10 7
Reweti Telephone-office	..	4 3 2	4 3 2
Carried forward	16,506 12 6	990 9 9	17,497 2 3

TABLE No. 6—*continued*.

STATEMENT showing the EXPENDITURE on TELEGRAPHS—*continued*.

Line.	Expenditure during Twelve Months ended 31st March, 1913.								
	Expenditure.			Material issued from Stores.			Total Cost during the Year.		
	£	s.	d.	£	s.	d.	£	s.	d.
Brought forward	16,506	12	6	990	9	9	17,497	2	3
New Wires—*continued.*									
Ruahau–Piha	29	5	4	..			29	5	4
Pahitoa Telephone Extension	2	3	0	4	2	5	6	5	5
Muriwai Beach Extension	64	17	3	4	2	6	68	19	9
Huia Telegraph Extension	195	19	7	12	12	7	208	12	2
Otahuhu–Papakura (metallic circuit)	..			38	16	9	38	16	9
Auckland–Pukekohe	122	17	3	67	6	7	190	3	10
Pukekohe East Extension	27	5	6	..			27	5	6
Pukekohe–Mercer	1	5	1	..			1	5	1
Tuketuke Telephone Extension	0	15	4	..			0	15	4
Thames–Wharehoe	3	16	0	..			3	16	0
Tairua–Hikuai Line	..			17	5	4	17	5	4
Ngatea Telephone-office	1	10	0	..			1	10	0
Parawai Telephone Extension	0	10	2	4	2	10	4	13	0
Kerepehi–Waitakaruru Extension	..			7	19	0	7	19	0
Pokeno – Pokeno Valley and Bombay – Paparata Valley Extension	67	6	4	..			67	6	4
Pokeno–Mercer (metallic circuit)	..			1	9	2	1	9	2
Mangataupiri Valley – Miranda – Mercer	5	9	0	..			5	9	0
Te Aroha (new office)	..			9	6	3	9	6	3
Whangamarino Extension	32	1	3	11	10	6	43	11	9
Waipuna Telephone Extension	2	19	3	3	19	9	6	19	0
Waiterimu Extension	81	13	4	..			81	13	4
Pukewhau Telephone Extension	0	13	5	4	0	10	4	14	3
Te Hoe Telephone Extension	0	19	0	16	8	11	17	7	11
Pukemiro Telephone Extension	35	6	10	7	13	9	43	0	7
Ngaruawahia–Mercer	0	5	4	..			0	5	4
Raglan – Te Akau	56	1	9	57	11	6	113	13	3
Taihoa Telephone Extension	0	17	6	9	3	7	10	1	1
Hamilton – Morrinsville Telephone-wire	41	5	5	136	15	6	178	0	11
Horsham Downs Extension	..			4	1	11	4	1	11
Hamilton–Cambridge (metallic circuit)	5	11	11	..			5	11	11
Kaipaki Line	47	2	1	53	13	0	100	15	1
Ngaroto Telephone Extension	0	2	6	4	2	2	4	4	8
Cambridge–Rotorua (metallic circuit)	1	11	2	..			1	11	2
Putaruru Loop Line	13	3	10	..			13	3	10
Miranui Extension	4	3	4	..			4	3	4
Rotoiti Telephone-office	..			4	7	7	4	7	7
Te Pu Telephone-office	..			5	1	11	5	1	11
Rotorua–Ngongotaha–Tauranga (metallic circuit)	842	19	10	606	13	6	1,449	13	4
Oropi Telephone-office	..			4	6	8	4	6	8
Kaharoa Extension	9	4	6	4	8	2	13	12	8
Ngawaro Telephone-office	..			4	8	3	4	8	3
Rotorua – Te Teko	2	1	9	188	7	8	190	9	5
Matahi	..			4	5	11	4	5	11
Te Teroa	..			4	6	11	4	6	11
Gate Pah (new office)	..			4	1	0	4	1	0
Matahanae – Oponae Telephone Extension	5	13	10	29	19	7	35	13	5
Okiore New Office	..			4	1	6	4	1	6
Wharepapa Telephone Extension	92	10	4	13	15	8	106	6	0
Muripara – Te Houhi	24	4	6	74	6	3	98	10	9
Puketua Extension	138	0	9	..			138	0	9
Auckland–Hamilton–Taumarunui (metallic circuit)	418	15	5	2,798	19	11	3,217	15	4
Otorohanga – Te Awamutu	24	5	10	14	0	0	38	5	10
Otorohanga–Hangatiki	12	12	8	106	2	6	118	15	2
Kirikau Telephone-office	..			4	9	7	4	9	7
Kokakoriki	..			4	9	5	4	9	5
Tai Haia Telephone Extension	2	0	3	11	7	3	13	7	6
Hikumutu Telephone-office	..			4	8	8	4	8	8
Kirikiri–Wharepuhunga	459	17	2	..			459	17	2
Matapara Telephone Extension	26	14	6	16	2	10	42	17	4
Patunga Telephone-office	..			4	9	5	4	9	5
Ranginui Telephone Extension	23	15	9	16	11	11	40	7	8
Otewa Telephone-office	..			4	12	7	4	12	7
Rangiatea Telephone Extension	5	8	0	66	2	1	71	10	1
Te Araroa (Morse and metallic circuit)	100	0	9	196	13	7	296	14	4
Te Araroa – Whangaparoa	..			183	15	2	183	15	2
Otoko – Te Karaka	132	14	8	2	10	6	135	5	2
Port Awanui – Te Araroa	..			75	9	4	75	9	4
Tolago Bay Extension	..			95	4	6	95	4	6
Auckland – New Plymouth Line Deviation	230	7	11	0	11	9	230	19	8
Mairoa – Marakopo Extension	210	2	5	3	9	7	213	12	0
Arapae Telephone Extension	4	0	0	4	7	6	8	7	6
Carried forward	20,119	1	1	6,033	3	3	26,152	4	4

TABLE No. 6—*continued.*

STATEMENT showing the EXPENDITURE on TELEGRAPHS—*continued.*

Line.		Expenditure during Twelve Months ended 31st March, 1913.		
		Expenditure.	Material issued from Stores.	Total Cost during the Year.
		£ s. d.	£ s. d.	£ s. d.
Brought forward		20,119 1 1	6,033 3 3	26,152 4 4
New Wires—*continued.*				
Taumatawaenga Extension		0 18 6	4 12 10	5 11 4
Taupo–Wairakei		21 7 0	..	21 7 0
Maraekowhai Telephone Extension		747 15 0	99 1 2	846 16 2
Ongarue–Tangitu		118 5 4	..	118 5 4
Waitewhena Extension		101 17 6	..	101 17 6
Waitaanga Extension		169 9 1	27 15 4	197 4 5
Ongarue–Taumarunui (metallic circuit)		135 10 6	..	135 10 6
Taringamotu Extension		3 5 8	..	3 5 8
Hukapapa Telephone Extension		23 10 2	4 2 2	27 12 4
Roto Extension		26 16 6	..	26 16 6
Manunui–Kakahi (metallic circuit)		31 14 3	47 4 10	78 19 1
Auckland – Wellington New Line—				
Auckland Section	£3,438 4 5			
Wellington Section	66 11 10			
		3,504 16 3	131 12 1	3,636 8 4
Taumarunui–Raurimu (metallic circuit)		97 19 1	34 8 11	132 8 0
Tangitere Telephone Extension		36 12 6	157 1 4	193 13 10
Whakaki Extension		2 3 0	8 5 2	10 8 2
Waitara–Urenui (metallic circuit)		129 15 10	74 3 3	203 19 1
Whatawhiti		..	15 7 1	15 7 1
Ngatimiro Telephone Extension		1 2 6	..	1 2 6
Ohakune–Raurimu (metallic circuit)		209 11 9	433 7 7	642 19 4
Ohakune–Horopito (metallic circuit)		..	128 1 3	128 1 3
Tarurutangi Telephone-office		44 17 4	34 8 11	79 6 3
Kent Road Telephone-office		..	4 12 10	4 12 10
Hillsborough Telephone Extension		43 10 3	78 13 3	122 3 6
Mongoiei Telephone Extension		1 8 11	..	1 8 11
Potaema Telephone Extension		1 0 0	..	1 0 0
Korito Telephone Extension		45 16 6	118 13 1	164 9 7
Ratapiko Telephone Extension		38 9 3	114 9 6	152 18 9
Stratford–Whangamomona (metallic circuit)		292 9 4	18 0 11	310 10 3
Karioi Telephone Extension		40 5 11	12 11 9	52 17 8
Waiouru–Karioi		28 6 8	125 13 11	154 0 7
Hawera–Manutahi (metallic circuit)		35 6 7	142 18 0	178 4 7
Rautiti Extension		203 12 9	70 19 9	274 12 6
Maungakaretu Extension		166 1 10	176 1 2	342 3 0
Te Ohu Telephone Extension		..	46 3 11	46 3 11
Napier–Waipawa (metallic circuit)		451 17 10	321 14 7	773 12 5
Hastings–Taradale (metallic circuit)		..	269 0 7	269 0 7
Wanganui–Raetihi (Oruakukuri and Ore Ore)		67 6 2	84 14 11	152 1 1
Orangimea–Rangitautau–Puao Extension		1 10 0	..	1 10 0
Makahiwi Telephone-office		..	4 9 5	4 9 5
Waverley–Waitotara (metallic circuit)		46 2 4	170 6 7	216 8 11
Nukuhau Extension		0 16 11	..	0 16 11
Mangarimu Telephone-office		1 0 0	4 11 4	5 11 4
Ruaroa Extension		6 7 0	..	6 7 0
Matatera Extension		2 7 6	40 19 8	43 7 2
Ohakea Extension		22 0 4	19 2 11	41 3 3
Whakaronga Extension		4 12 6	15 18 5	20 10 11
Palmerston North – Wanganui		256 0 5	..	256 0 5
Wellington – Palmerston North (metallic circuit)		471 16 7	110 19 11	582 16 6
Foxton – Levin (metallic circuit)		18 8 8	..	18 8 8
Putara Party Line		..	18 2 6	18 2 6
Masterton–Alfredton (metallic circuit)		333 11 9	870 4 6	1,203 16 3
Carterton–Gladstone		..	26 18 10	26 18 10
Wellington – Porirua Extension		27 19 0	179 4 0	207 3 0
Wellington–Kaiwarra (metallic circuit)		..	13 5 7	13 5 7
Hikunga Telephone Extension		0 2 6	..	0 2 6
Karamata Office		..	3 18 3	3 18 3
Telegraph Office, new G.P.O., Wellington		167 6 2	..	167 6 2
Wellington–Hataitai		..	3 12 5	3 12 5
Wellington Wireless Station		5,581 17 0	..	5,581 17 0
Karori Bureau		..	3 16 4	3 16 4
Chatham Islands Wireless		239 17 6	..	239 17 6
Port Hardy Telephone Extension		52 15 1	179 15 0	232 10 1
Te Puru Extension		14 12 9	9 19 0	24 11 9
Onakaka Telephone Extension		12 16 6	26 11 11	39 8 5
Makiri Telephone Extension		3 14 0	4 8 7	8 2 7
Tasman Telephone Extension		51 3 3	78 4 10	129 8 1
Picton–Mahakipawa–Havelock and Mahakipawa–Manaroa (metallic circuit)		83 15 8	339 4 9	423 0 5
Carried forward		34,342 14 3	10,940 18 1	45,293 12 4

TABLE No. 6—*continued.*

STATEMENT showing the EXPENDITURE on TELEGRAPHS—*continued.*

Line.	Expenditure during Twelve Months ended 31st March, 1913.								
	Expenditure.			Material issued from Stores.			Total Cost during the Year.		
	£	s.	d.	£	s.	d.	£	s.	d.
Brought forward	34,342	14	3	10,940	18	1	45,293	12	4
New Wires—*continued.*									
Havelock–Timatangi	175	6	0	368	9	3	543	15	3
Ward–Kekerangu	132	8	5	0	11	5	132	19	10
Fabian's Valley Extension	..			4	7	2	4	7	2
Kawatiri–Glenhope	2	1	2	0	1	3	2	2	5
Horopai Telephone-office	..			4	7	4	4	7	4
Mangatina Telephone Extension	48	13	1	35	5	7	83	18	8
Aweko Telephone Extension	6	6	0	8	19	8	15	5	8
Berlin's Extension	163	0	8	155	4	2	318	4	10
Charleston – Tiromoana Extension	116	7	4	1	7	7	117	14	11
Waikowhai Telephone Extension	29	8	5	..			29	8	5
Hapuku – Clarence Bridge (metallic circuit)	106	3	1	71	1	11	177	5	0
Kaikoura–Hapuku (metallic circuit)	9	15	3	146	7	10	156	3	1
Greymouth–Stillwater	7	13	0	92	6	3	99	19	3
Hokitika–Kumara Telephone-wire	..			86	12	5	86	12	5
Mahinapua Telephone-office	9	16	3	..			9	16	3
Hokitika–Kanieri–Forks–Ruatapu (metallic circuit)	..			67	3	10	67	3	10
Herepo Extension	..			0	13	11	0	13	11
Harihari Extension	0	11	8	..			0	11	8
Lower Cook River Settlement	..			12	9	5	12	9	5
Tokamo Telephone Extension	30	12	10	18	4	1	48	16	11
Christchurch–Kaikoura (metallic circuit)	..			1,035	3	10	1,035	3	10
Mason River Deviation	1	5	0	..			1	5	0
Amberley–Waipara (metallic circuit)	..			21	12	5	21	12	5
Sheffield–Springfield (metallic circuit)	40	1	0	34	14	5	74	15	5
Kirwee–Courtenay	..			0	6	6	0	6	6
Whakahua Extension	138	13	6	1	4	11	139	18	5
Kirwee–Darfield	..			1	15	0	1	15	0
Sheffield–Darfield (metallic circuit)	84	10	2	59	11	11	144	2	1
Darfield–Christchurch	..			61	19	7	61	19	7
Breezes Road Extension	..			4	5	8	4	5	8
New Brighton and North New Brighton	39	4	6	10	16	1	50	0	7
South Brighton Telephone-office	..			11	10	0	11	10	0
New Brighton Wireless Station	0	2	0	..			0	2	0
St. Martin's Line	..			5	15	1	5	15	1
Hororata–Whitecliffs (metallic circuit)	82	11	2	15	9	9	98	0	11
Cashmere Hills	..			3	7	7	3	7	7
Burnham School Telephone Extension	2	14	2	8	13	0	11	7	2
East Oxford	..			146	10	6	146	10	6
Ladbrooks Extension	14	14	0	34	15	7	49	9	7
Lyndhurst–Methven (metallic circuit)	42	18	8	..			42	18	8
Glentunnel Bureau	..			3	2	0	3	2	0
Irwell Telephone Extension	10	2	0	17	13	9	27	15	9
Te Pirita (metallic circuit)	..			4	4	2	4	4	2
Christchurch–Rakaia (metallic circuit)	183	8	10	564	9	11	747	18	9
Bankside Telephone Extension	..			29	13	11	29	13	11
Huhuka – Turnbull River Extension	52	3	4	0	3	3	52	6	7
Sherwood Downs Extension	29	8	0	19	0	3	48	8	3
Tripp Telephone Extension	62	3	8	18	9	9	80	13	5
Hinds (metallic circuit)	6	4	11	..			6	4	11
Lynnford Extension	1	7	7	14	8	6	15	16	1
Maranon Extension	15	2	0	12	12	8	27	14	8
Christchurch–Timaru (metallic circuit)	580	17	3	1,528	16	9	2,109	14	0
Peel Forest Bureau	..			0	7	0	0	7	0
Pleasant Valley – Te Moana Extension	110	7	8	40	17	6	151	5	2
Rangitata Island Extension	0	11	6	30	16	9	31	8	3
Pleasant Point (new office)	..			11	6	1	11	6	1
Chamberlain Extension	4	0	6	..			4	0	6
Esk Valley Extension	185	15	9	31	2	5	216	18	2
Lyalldale – Esk Valley	..			24	13	0	24	13	0
Pareora – St. Andrew's (metallic circuit)	12	12	0	12	15	2	25	7	2
St. Andrew's – Makikihi	19	13	8	32	9	3	52	2	11
Makikihi Toll Line	..			2	6	8	2	6	8
Willowbridge–Waimate	7	2	10	2	6	8	9	9	6
Timaru–Glenavy–Oamaru Trunk	..			11	17	3	11	17	3
Kuriheka Telephone Extension	1	11	0	..			1	11	0
Green Island Morse	..			0	11	0	0	11	0
Bendigo Extension	..			0	5	3	0	5	3
Lindis Pass Telephone Extension	384	0	4	49	8	2	433	8	6
Roslyn Telephone-office	..			6	6	7	6	6	7
Pukehiki Telephone-office	..			5	8	1	5	8	1
Kyeburn Diggings Telephone Extension	198	3	5	34	11	0	232	14	5
Newborough Telephone Bureaux	11	9	0	10	2	7	21	11	7
Middlemarch – Mount Stoker Telephone Extension	323	0	5	..			323	0	5
Carried forward	37,826	17	3	15,992	8	4	53,819	5	7

TABLE No. 6—*continued.*

STATEMENT showing the EXPENDITURE on TELEGRAPHS—*continued.*

Line.	Expenditure during Twelve Months ended 31st March, 1913. Expenditure.	Material issued from Stores.	Total Cost during the Year.
	£ s. d.	£ s. d.	£ s. d.
Brought forward	37,826 17 3	15,992 8 4	53,819 5 7
New Wires—*continued.*			
Heathfield Telephone-office	0 10 0	3 0 3	3 10 3
Parkhill Telephone Extension	..	0 10 0	0 10 0
Poatiri Telephone Extension	10 0 0	8 19 5	18 19 5
Glenleith Telephone Bureaux	9 7 3	16 2 5	25 9 8
Pararahi Extension	99 6 0	0 17 3	100 3 3
North Chatton Telephone Extension	43 5 6	20 18 6	64 4 0
Otautau–Nightcaps (metallic circuit)	126 13 9	130 12 10	257 6 7
Invercargill–Lumsden (metallic circuit)	272 4 9	646 9 5	918 14 2
Manuka Creek Telephone-office	0 1 8	..	0 1 8
Te Houka Telephone Extension	61 7 4	27 12 11	89 0 3
Glencoe Telephone Extension	259 11 11	36 19 4	296 11 3
Parawa Telephone-office	..	6 5 1	6 5 1
Mabel Bush Telephone Extension	19 4 3	14 10 3	33 14 6
Bluff (metallic circuit)	..	509 13 9	509 13 9
Dacre Extension	79 11 1	15 9 3	95 0 4
Winton (metallic circuit)	..	12 0 8	12 0 8
Menzies Ferry Telephone Extension	33 15 8	1 19 7	35 15 3
Owaka–Balclutha Trunk Wire	258 8 6	180 9 4	438 17 10
Hinahina Telephone Extension	30 14 1	8 19 5	39 13 6
Invercargill–Riverton (metallic circuit)	73 4 8	198 3 0	271 7 8
Awarua Wireless	6,085 1 2	..	6,085 1 2
Etal Creek Telephone Extension	256 16 10	29 4 3	286 1 1
Turi Telephone Extension	1 13 0	..	1 13 0
	45,547 14 8	17,861 5 3	63,408 19 11
Total Telephone Exchanges and New Wires	103,294 0 5	85,112 16 3	188,406 16 8
Stock of materials increased during the year by	..	62,967 17 0	62,967 17 0
Total expenditure during the year ended 31st March, 1913	103,294 0 5	148,080 13 3	251,374 13 8
Total expenditure to 31st March, 1912	..	..	2,025,750 14 6
Total expenditure, 1912–13	..	..	251,374 13 8
			2,277,125 8 2
Liabilities at 31st March, 1913	..	..	171,297 1 0
Total expenditure and liabilities	..	..	2,448,422 9 2

TABLE No. 7.

STATEMENT showing the EXPENDITURE on PUBLIC BUILDINGS out of Public Works Fund to 31st March, 1913, and the LIABILITIES on that Date.

—	Total Expenditure to 31st March, 1912.	Expenditure for Year ended 31st March, 1913.	Total Expenditure to 31st March, 1913.	Liabilities on Authorities, Contracts, &c., 31st March, 1913.	Total Expenditure and Liabilities.
	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
Judicial	726,414 5 11	45,430 18 3	771,845 4 2	10,760 17 11	782,606 2 1
Postal and Telegraph	907,822 18 11	122,999 8 0	1,030,822 6 11	29,970 3 7	1,060,792 10 6
Customs	49,440 16 11	..	49,440 16 11	..	49,440 16 11
Offices for Public Departments	364,983 4 6	42,087 9 3	407,070 13 9	25,689 11 8	432,760 5 5
Mental Hospitals	606,442 17 5	46,181 4 7	652,624 2 0	6,345 13 10	658,969 15 10
Alexandra Depot, Wellington	8,083 9 6	..	8,083 9 6	..	8,083 9 6
School Buildings	1,970,351 6 0	105,000 2 0	2,075,351 8 0	4,789 12 10	2,080,141 0 10
Hospitals	128,091 19 4	8,750 3 3	136,842 2 7	..	136,842 2 7
Quarantine Stations	6,863 19 5	..	6,863 19 5	..	6,863 19 5
Parliament Buildings	75,949 7 5	..	75,949 7 5	..	75,949 7 5
Parliament Buildings: New buildings	1,801 5 11	15,841 2 6	17,642 8 5	1,552 17 0	19,195 5 5
Parliament Buildings: Alterations to streets surrounding grounds and purchase of land	309 16 11	2,965 0 4	3,274 17 3	3 10 9	3,278 8 0
Government House, Wellington (land and new building)	57,387 11 10	1,044 19 7	58,432 11 5	..	58,432 11 5
Agricultural	34,998 11 7	*6,474 14 11	41,473 6 6	323 7 9	41,796 14 3
Public Health	32,377 19 4	375 13 0	32,753 12 4	..	32,753 12 4
Workers' Dwellings	22,644 6 6	46,454 17 5	69,099 3 11	..	69,099 3 11
Miscellaneous	48,068 10 7	1,586 9 5	49,655 0 0	1,474 15 7	51,129 15 7
Totals	5,042,032 8 0	445,192 2 6	5,487,224 10 6	80,910 10 11	5,568,135 1 5

* Includes £50 charged to "unauthorised."

TABLE No. 8.

STATEMENT showing the EXPENDITURE on LIGHTHOUSES, HARBOUR-WORKS, and HARBOUR-DEFENCES out of Public Works Fund, to 31st March, 1913, and the LIABILITIES on that Date.

—	Total Expenditure to 31st March, 1912.	Net Expenditure during Twelve Months ended 31st March, 1913.	Total Expenditure to 31st March, 1913.	Liabilities on Authorities, Contracts, &c., to 31st March, 1913.	Total Expenditure and Liabilities.
LIGHTHOUSES.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
Akaroa	7,148 16 5	..	7,148 16 5	..	7,148 16 5
Brothers	6,241 0 0	..	6,241 0 0	..	6,241 0 0
Cape Brett	11,237 3 5	..	11,237 3 5	..	11,237 3 5
Cape Campbell	4,218 3 9	..	4,218 3 9	..	4,218 3 9
Cape Egmont	3,354 6 4	..	3,354 6 4	..	3,354 6 4
Cape Foulwind	6,955 9 1	..	6,955 9 1	..	6,955 9 1
Cape Kidnappers	2,109 11 7	..	2,109 11 7	..	2,109 11 7
Cape Maria van Diemen	7,614 13 11	..	7,614 13 11	..	7,614 13 11
Cape Palliser	7,312 9 6	..	7,312 9 6	..	7,312 9 6
Cape Saunders	6,066 6 3	..	6,066 6 3	..	6,066 6 3
Castle Point	3,586 16 7	5,808 12 8	9,395 9 3	28 4 4	9,423 13 7
Centre Island	5,785 19 0	..	5,785 19 0	..	5,785 19 0
Chicken Island	49 10 1	962 1 9	1,011 11 10	..	1,011 11 10
Cuvier Island	7,405 9 11	..	7,405 9 11	..	7,405 9 11
Dieffenbach Point	311 12 11	4 7 0	315 19 11	..	315 19 11
East Cape	9,270 13 9	..	9,270 13 9	..	9,270 13 9
Fog-signals	2,341 8 0	..	2,341 8 0	..	2,341 8 0
French Pass Beacon	668 15 8	..	668 15 8	..	668 15 8
French Pass	1,427 17 5	..	1,427 17 5	..	1,427 17 5
Godley Head Fog-signal, protection of road	152 2 0	..	152 2 0	..	152 2 0
Hokitika	801 9 7	..	801 9 7	..	801 9 7
Jackson's Reef Beacon	3,180 0 5	..	3,180 0 5	..	3,180 0 5
Jackson's Head Beacon	1,220 0 7	..	1,220 0 7	..	1,220 0 7
Jack's Point	1,204 10 9	..	1,204 10 9	..	1,204 10 9
Kahurangi Point	9,528 1 1	..	9,528 1 1	..	9,528 1 1
Kaipara	5,571 8 0	..	5,571 8 0	..	5,571 8 0
Manukau Heads	600 13 11	..	600 13 11	..	600 13 11
Marine Store	499 11 3	11 8 0	510 19 3	..	510 19 3
North Cape	..	2,049 9 6	2,049 9 6	..	2,049 9 6
Moeraki	2,943 1 11	..	2,943 1 11	..	2,943 1 11
Moko Hinou	8,185 11 0	..	8,185 11 0	..	8,185 11 0
Nugget Point (dwellings)	746 6 6	..	746 6 6	..	746 6 6
Portland Island	6,554 14 5	..	6,554 14 5	..	6,554 14 5
Puysegur Point	9,958 19 5	..	9,958 19 5	..	9,958 19 5
Stephen Island	9,454 18 5	..	9,454 18 5	..	9,454 18 5
Sugarloaf Light	..	175 0 0	175 0 0	..	175 0 0
Timaru	1,116 17 3	..	1,116 17 3	..	1,116 17 3
Tiritiri Cable	1,085 19 6	..	1,085 19 6	..	1,085 19 6
Tory Channel	353 7 7	..	353 7 7	..	353 7 7
Tuahine Point	2,312 12 6	19 13 6	2,332 6 0	..	2,332 6 0
Waipapapa Point	5,969 18 11	..	5,969 18 11	..	5,969 18 11
Miscellaneous, including expenditure on s.s. "Hinemoa" and "Stella"	20,866 18 1	..	20,866 18 1	..	20,866 18 1
Total Lighthouses	185,413 6 8	9,030 12 5	194,443 19 1	28 4 4	194,472 3 5
HARBOUR-WORKS.					
Awanui Wharf and shed	100 0 0	..	100 0 0	..	100 0 0
Horeke Wharf	352 6 6	..	352 6 6	..	352 6 6
Kohukohu reclamation wall	35 9 11	252 8 0	287 17 11	..	287 17 11
Motukaraka Wharf	..	..	..	200 0 0	200 0 0
New house for boatman, Hokianga Harbour	289 17 0	..	289 17 0	..	289 17 0
Kaipara, removal of rocks	1,091 3 7	533 11 10	1,624 15 5	..	1,624 15 5
Kaipara, Shelly Beach Beacon	147 2 8	136 10 6	283 13 2	..	283 13 2
Raupo, Otamatea, wharf repairs	*Cr.* 80 8 9	..	*Cr.* 80 8 9	..	*Cr.* 80 8 9
Tangiteroria Wharf	200 0 0	..	200 0 0	..	200 0 0
Tangaihi Wharf	..	225 0 0	225 0 0	..	225 0 0
Kirikopuni Wharf	150 0 0	..	150 0 0	..	150 0 0
Maungaturoto Wharf	250 0 0	..	250 0 0	..	250 0 0
Wharf at Howick	1,087 18 2	..	1,087 18 2	..	1,087 18 2
Manukau Wharf at Sandspit	150 0 0	..	150 0 0	..	150 0 0
Manukau Harbour Endowment, cutting up and roading	677 16 9	534 13 9	1,212 10 6	..	1,212 10 6
Leigh Wharf	..	..	..	142 19 8	142 19 8
Pollck Wharf, Manukau	150 0 0	..	150 0 0	..	150 0 0
Whangarei Heads Wharf	600 0 0	..	600 0 0	..	600 0 0
Waipu, improvement of river	1,000 0 0	..	1,000 0 0	..	1,000 0 0
Waiwera Wharf	350 0 0	..	350 0 0	..	350 0 0
Wade River, clearing	105 1 6	750 0 0	855 1 6	..	855 1 6
Puhoi River, clearing	79 19 0	..	79 19 0	..	79 19 0
Awhitu Wharf	50 0 0	..	50 0 0	..	50 0 0
Matakana Harbour	651 8 6	4 5 6	655 14 0	17 1 8	672 15 8
Onehunga, examining-room and office	194 3 2	..	194 3 2	..	194 3 2

TABLE No. 8—*continued*.

STATEMENT showing the EXPENDITURE on LIGHTHOUSES, HARBOUR-WORKS, and HARBOUR-DEFENCES out of Public Works Fund, &c.—*continued*.

	Total Expenditure to 31st March, 1912.	Net Expenditure during Twelve Months ended 31st March, 1913.	Total Expenditure to 31st March, 1913.	Liabilities on Authorities, Contracts, &c., to 31st March, 1913.	Total Expenditure and Liabilities.
HARBOUR-WORKS—*continued*.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
Onehunga, dredging, &c., near wharf	758 8 3	..	758 8 3	..	758 8 3
Orua Bay Wharf	144 16 4	..	144 16 4	..	144 16 4
Port Fitzroy, Great Barrier Wharf ..	8 0 0	..	8 0 0	..	8 0 0
Huia Wharf	252 17 3	..	252 17 3	..	252 17 3
Graham Beach Wharf	50 0 0	..	50 0 0	..	50 0 0
Waitemata: Deep Creek Wharf ..	50 0 0	..	50 0 0	..	50 0 0
Warkworth Wharf	1 16 6	..	1 16 6	..	1 16 6
Waiuku Channel	357 11 6	..	357 11 6	..	357 11 6
Waiuku berthage and wharf accommodation	150 0 0	..	150 0 0	..	150 0 0
Waiuku–Waikato Canal survey ..	11 6 2	..	11 6 2	..	11 6 2
Mercury Bay Wharf	328 14 6	..	328 14 6	..	328 14 6
Coromandel Wharf	*Cr.* 0 10 0	..	*Cr.* 0 10 0	..	*Cr.* 0 10 0
Cabbage Bay Wharf	461 1 0	..	461 1 0	17 0 0	478 1 0
Omokoroa Wharf	150 0 0	..	150 0 0	..	150 0 0
Uretara Wharf	100 0 0	..	100 0 0	..	100 0 0
Matata Wharf	50 0 0	..	50 0 0	..	50 0 0
Opotiki Wharf	500 0 0	..	500 0 0	..	500 0 0
Waikokopu Harbour	831 19 7	..	831 19 7	..	831 19 7
Wairoa Harbour	1,500 0 0	..	1,500 0 0	..	1,500 0 0
Nuhaka, land for harbour purposes ..	141 12 6	..	141 12 6	..	141 12 6
Napier Harbour	4,097 14 9	..	4,097 14 9	..	4,097 14 9
Lemon Point Wharf	..	300 0 0	300 0 0	..	300 0 0
Awakino River improvements ..	3 9 6	106 10 11	110 0 5	9 3 4	119 3 9
Mokau Wharf	312 13 9	250 0 0	562 13 9	..	562 13 9
Mokau River improvements ..	50 0 0	..	50 0 0	..	50 0 0
Ruakiwi Wharf	..	100 0 0	100 0 0	..	100 0 0
Waitara Harbour..	2,000 0 0	..	2,000 0 0	..	2,000 0 0
Waikawau River, removal of rock at entrance	50 0 0	..	50 0 0	..	50 0 0
Patea River, removing eel-weirs ..	50 0 0	..	50 0 0	..	50 0 0
Patea River, snagging	100 0 0	..	100 0 0	..	100 0 0
Waitotara River, snagging	555 1 3	..	555 1 3	..	555 1 3
Manawatu River, snagging ..	214 13 3	..	214 13 3	..	214 13 3
Foxton Marine Reserve, Protection of	50 0 0	..	50 0 0	..	50 0 0
Castlepoint Jetty..	51 14 1	..	51 14 1	..	51 14 1
Picton, removal of old wharf ..	94 0 0	..	94 0 0	..	94 0 0
Havelock Harbour	750 0 11	..	750 0 11	..	750 0 11
Wairangi Bay Wharf, Croixelles ..	58 13 8	..	58 13 8	..	58 13 8
Nelson, dredging harbour	2,806 15 8	..	2,806 15 8	..	2,806 15 8
Elmslie Bay Wharf	150 0 0	..	150 0 0	..	150 0 0
Waikawa Bay Wharf	85 0 0	..	85 0 0	..	85 0 0
Elaine Bay Wharf	50 0 0	..	50 0 0	..	50 0 0
Motueka Wharf, protection ..	300 0 0	..	300 0 0	..	300 0 0
Tata Islands harbour of refuge ..	1,743 1 7	..	1,743 1 7	..	1,743 1 7
Takaka Harbour	127 15 9	215 11 10	343 7 7	..	343 7 7
Collingwood Harbour	1,170 18 8	..	1,170 18 8	..	1,170 18 8
Pakawau Wharf	2 0 0	..	2 0 0	..	2 0 0
Little Wanganui Wharf, wharf approach, and snagging river	336 0 10	116 13 3	452 14 1	..	452 14 1
German Bay Wharf	..	100 0 0	100 0 0	..	100 0 0
Karamea Wharf	656 4 11	..	656 4 11	..	656 4 11
Karamea River improvements ..	6,000 3 5	2,924 16 4	8,924 19 9	65 6 6	8,990 6 3
Karamea Harbour Light	100 3 11	..	100 3 11	..	100 3 11
Westport Harbour	14,110 18 7	..	14,110 18 7	..	14,110 18 7
Point Elizabeth Harbour	1,415 6 7	..	1,415 6 7	..	1,415 6 7
Greymouth Harbour	127,233 19 6	..	127,233 19 6	..	127,233 19 6
Hokitika Harbour	58,780 5 10	..	58,780 5 10	..	58,780 5 10
Okarito Harbour	1,504 17 7	..	1,504 17 7	..	1,504 17 7
Okuru Wharf and River improvements	812 15 9	..	812 15 9	..	812 15 9
Portobello Fish-hatchery Ponds ..	250 0 0	..	250 0 0	..	250 0 0
Martin's Bay, removal of rock ..	5 0 0	..	5 0 0	..	5 0 0
Martin's Bay shed	14 13 10	..	14 13 10	..	14 13 10
Holyford River, removal of rocks ..	370 12 1	..	370 12 1	..	370 12 1
Jackson's Bay Jetty	32 6 4	..	32 6 4	..	32 6 4
Cape Campbell Lighthouse Jetty ..	6 5 0	..	6 5 0	..	6 5 0
Kaikoura Jetty and Harbour ..	3,276 16 10	..	3,276 16 10	..	3,276 16 10
Kaikoura Wharf	1,004 11 6	..	1,004 11 6	..	1,004 11 6
Akaroa–Le Bon's Bay Wharf, repairs	55 0 0	..	55 0 0	..	55 0 0
Lyttelton, reclamation-works, Sticking Point	1,910 18 10	..	1,910 18 10	..	1,910 18 10
Wellington Meteorological Observatory	..	268 6 2	268 6 2	..	268 6 2
Port Levy Jetty	250 0 0	..	250 0 0	..	250 0 0
Timaru Harbour	100,000 0 0	..	100,000 0 0	..	100,000 0 0
Chatham Islands: Waitangi, removal and extension of wharf and store	90 0 0	..	90 0 0	..	90 0 0

TABLE No. 8—*continued.*

STATEMENT showing the EXPENDITURE on LIGHTHOUSES, HARBOUR-WORKS, and HARBOUR-DEFENCES out of Public Works Fund, &c.—*continued.*

—	Total Expenditure to 31st March, 1912.	Net Expenditure during Twelve Months ended 31st March, 1913.	Total Expenditure to 31st March, 1913.	Liabilities on Authorities, Contracts, &c., to 31st March, 1913.	Total Expenditure and Liabilities.
HARBOUR-WORKS—*continued.*	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
Chatham Islands: Shed at Pitt Island	1 10 0	..	1 10 0	..	1 10 0
Taiaroa Heads Lighthouse, enlarging and repairing dwelling	83 7 1	..	83 7 1	..	83 7 1
Moeraki Boat-slip	175 0 0	..	175 0 0	..	175 0 0
Dunedin, St. Clair, protection of Ocean Beach	532 12 8	..	532 12 8	..	532 12 8
Brighton Boat Harbour	25 12 6	..	25 12 6	..	25 12 6
Waikouaiti River improvements ..	100 0 0	..	100 0 0	..	100 0 0
Toitois Jetty	1,000 0 0	..	1,000 0 0	..	1,000 0 0
Balclutha Jetty	250 0 0	..	250 0 0	..	250 0 0
Nugget Bay, landing-slip, &c. ..	690 1 11	261 11 5	951 13 4	..	951 13 4
Tautuku Wharf and River improvements	200 0 0	..	200 0 0	..	200 0 0
Catlin's River, removal of rocks ..	277 19 0	..	277 19 0	..	277 19 0
Catlin's River Jetty	1,015 7 7	..	1,015 7 7	..	1,015 7 7
Queenstown Beacon	35 0 0	..	35 0 0	..	35 0 0
Queenstown Jetty	297 8 0	..	297 8 0	..	297 8 0
Stewart Island Wharf, Horseshoe Bay	780 0 0	..	780 0 0	..	780 0 0
Stewart Island, snagging Fresh-water River	500 0 0	..	500 0 0	..	500 0 0
Stewart Island: Wharf, Golden Bay	100 0 0	..	100 0 0	..	100 0 0
Stewart Island: Wharf, Half-moon Bay	750 0 0	300 0 0	1,050 0 0	..	1,050 0 0
Raising dredge "Hapuka" ..	777 7 9	..	777 7 9	..	777 7 9
Grab dredge for harbour-works ..	635 0 10	22 8 5	657 9 3	23 14 2	662 13 5
Miscellaneous	407 10 0	12 14 6	420 4 6	..	420 4 6
Total Harbour-works ..	355,204 3 1	7,415 2 5	362,619 5 6	475 5 4	363,094 10 10
HARBOUR-DEFENCES.					
Guns	147,768 18 10	..	147,768 18 10	..	147,768 18 10
Ammunition	24,531 6 7	..	24,531 6 7	..	24,531 6 7
War Office stores..	9,933 10 9	..	9,933 10 9	..	9,933 10 9
Torpedo-boats and torpedoes ..	20,203 13 7	..	20,203 13 7	..	20,203 13 7
Submarine-mining stores	17,665 2 2	..	17,665 2 2	..	17,665 2 2
Miscellaneous	18,009 5 10	..	18,009 5 10	..	18,009 5 10
Works in Dominion	264,365 10 6	339 7 0	264,704 17 6	24 0 0	264,728 17 6
Land for depots and batteries ..	38,327 14 6	..	38,327 14 6	..	38,327 14 6
Total Harbour-defences ..	540,805 2 9	339 7 0	541,144 9 9	..	541,168 9 9
Grand total	1,081,422 2 2	16,785 1 10	1,098,207 4 0	527 9 8	1,098,734 13 8

APPENDICES TO THE PUBLIC WORKS STATEMENT, 1913.

APPENDIX A.

AUDITED STATEMENT OF EXPENDITURE ON PUBLIC WORKS OUT OF THE PUBLIC WORKS FUND FOR THE YEAR 1912–13.

Prepared in compliance with Section 8 of the Public Works Act, 1908.

Public Works Department, Wellington, 10th June, 1913.

Sir,—

In compliance with the 8th section of the Public Works Act, 1908, I enclose a statement of the expenditure during the preceding financial year on all works and services chargeable to the Public Works Fund.

I have, &c.,

W. Fraser,
Minister of Public Works.

The Controller and Auditor-General, Wellington.

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Statement of Net Expenditure on all Works and Services chargeable to the Public Works Fund for the Year 1912–13.

Class.	Votes.	Summary.	Appropriation.	Expenditure.			Credits.			Net Expenditure		
		Public Works Fund.	£	£	s.	d.	£	s.	d.	£	s.	d.
XVI	92	Public Works, Departmental ..	57,461	57,523	17	11	537	14	4	56,986	3	7
XVII	93–94	Railways	1,304,500	1,158,669	11	8	9,837	7	3	1,148,832	4	5
XVIII	95–103	Public Buildings	479,377	453,894	14	6	8,752	12	0	445,142	2	6
XIX	104–106	Lighthouses, Harbour-works, and Harbour Defences	24,002	16,821	2	1	36	0	3	16,785	1	10
XX	107	Tourist and Health Resorts ..	15,000	12,973	8	10	67	13	11	12,905	14	11
XXI	108	Immigration	20,000	47,875	4	9	33,418	16	11	14,456	7	10
XXII	109–111	Roads, Bridges, and other Public Works	580,450	392,652	6	4	18,306	13	0	374,345	13	4
XXIII	112	Development of Goldfields ..	14,560	14,643	7	4	3,999	8	8	10,643	18	8
XXIV	113	Telegraph Extension	225,000	284,120	12	10	32,745	19	2	251,374	13	8
XXV	114	Contingent Defence	60,000	23,796	0	1	5	18	0	23,790	2	1
XXVI	115–116	Lands Improvement	50,150	28,472	14	10	5,922	8	0	22,550	6	10
		Unauthorized	..	1,580	0	9	853	4	11	726	15	10
		Total Public Works Fund ..	2,830,500	2,493,023	1	11	114,483	16	5	2,378,539	5	6

C. E. Bennett,
Accountant.

H. J. H. Blow,
Under-Secretary.

Examined and found correct.

Robert J. Collins,
Controller and Auditor-General.

Note.—Charges and expenses of raising loans not included in above figures.
(Details on next page.)

APPENDIX A—*continued.*

Vote No.	Name of Vote.	Appropriation.	Expenditure.			Credits.			Net Expenditure.		
	PUBLIC WORKS FUND.	£	£	s.	d.	£	s.	d.	£	s.	d.
	Public Works, Departmental—										
92	Public Works, Departmental	57,461	57,523	17	11	537	14	4	56,986	3	7
	Railways—										
	Railway-construction—										
	Kaihu Railway Extension	15,000	8,799	19	6	..			8,799	19	6
	Kawakawa–Hokianga	40,000	31,071	17	10	94	3	8	30,977	14	2
	Kawakawa–Grahamtown	3,000	2,249	11	7	3	17	8	2,245	13	11
	North Auckland Main Trunk	80,000	74,336	18	10	401	7	4	73,935	11	6
	Huntly–Awaroa	20,000	11,749	3	4	17	4	3	11,731	19	1
	Raetihi – Main Trunk	10,000	2,024	7	11	1	17	0	2,022	10	11
	East Coast Main Trunk—										
	Waihi–Tauranga	5,000	5,362	17	9	0	1	6	5,362	16	3
	Tauranga–Paengaroa	25,000	28,632	14	8	170	6	6	28,462	8	2
	Gisborne–Motu	80,000	58,562	13	10	1,014	9	0	57,548	4	10
	Napier–Gisborne—										
	North End	15,000	15,683	11	1	6	5	4	15,677	5	9
	South End	12,000	11,444	3	10	5	15	2	11,438	8	8
	Mount Egmont Branch	10,000	4,656	13	0	..			4,656	13	0
	Stratford–Main Trunk	90,000	97,386	4	11	2,095	10	4	95,290	14	7
	Foxton – New Plymouth (Manawapau Deviation)	4,000	4,007	4	0	..			4,007	4	0
	South Island Main Trunk—										
	North End	20,000	21,879	15	10	2	19	1	21,876	16	9
	South End	30,000	24,390	0	4	425	7	0	23,964	13	4
93	Midland Railway—										
	Nelson End	30,000	23,653	19	5	287	9	2	23,366	10	3
	Reefton End	17,000	10,107	12	2	34	12	4	10,072	19	10
	Otira–Bealey	70,000	62,119	3	6	310	4	7	61,808	18	11
	Broken River to Bealey	50,000	36,925	9	7	139	13	5	36,785	16	2
	Westport–Inangahua	20,000	18,779	10	6	68	3	3	18,711	7	3
	Ngahere–Blackball	..	..			..			..		
	Greymouth – Point Elizabeth	12,000	9,979	13	8	..			9,979	13	8
	Ross–Mikonui	..	..			..			..		
	Waimate Branch Extension	5,000	..			..			..		
	Lawrence–Roxburgh	20,000	17,393	17	7	2	4	4	17,391	13	3
	Catlin's–Waimahaka—										
	East End	48,000	29,381	5	11	586	13	3	28,794	12	8
	West End	2,000	510	18	4	14	16	0	496	2	4
	Winton – Heddon Bush	8,000	..			..			..		
	Orepuki–Waiau Extension	..	..			..			..		
	Land Claims, &c.	1,500	314	11	4	48	18	9	265	12	7
	Surveys, New Lines of Railway	5,000	3,299	18	9	7	18	4	3,292	0	5
	Permanent-way Materials	100,000	75,848	11	9	616	17	2	75,231	14	7
	Total Vote, Railway-construction ..	847,500	690,552	10	9	6,356	14	5	684,195	16	4
94	Additions to Open Lines	457,000	468,117	0	11	3,480	12	10	464,636	8	1
	Public Buildings—										
95	General	*56,000	69,425	16	4	5,900	15	3	63,525	1	1
96	Judicial	51,700	46,202	15	4	771	17	1	45,430	18	3
97	Postal and Telegraph	†139,500	123,551	2	0	551	14	0	122,999	8	0
98	Agricultural	10,000	6,424	14	11	..			6,424	14	11
99	Mental Hospitals	45,000	46,248	2	1	66	17	6	46,181	4	7
100	Hospitals and Charitable Institutions	9,677	8,892	3	3	142	0	0	8,750	3	3
101	Public Health	1,000	375	13	0	..			375	13	0
102	School Buildings	106,500	106,131	4	2	1,131	2	2	105,000	2	0
103	Workers' Dwellings	60,000	46,643	3	5	188	6	0	46,454	17	5
	Lighthouses, Harbour-works, and Harbour Defences—										
104	Lighthouses	10,000	9,038	14	6	8	2	1	9,030	12	5
105	Harbour-works	11,502	7,443	0	7	27	18	2	7,415	2	5
106	Harbour Defences	2,500	339	7	0	..			339	7	0
	Tourist and Health Resorts—										
107	Tourist and Health Resorts	15,000	12,973	8	10	67	13	11	12,905	14	11
	Immigration—										
108	Immigration	20,000	47,875	4	9	33,418	16	11	14,456	7	10
	Construction and Maintenance of Roads, Bridges, and other Public Works—										
109	Roads, &c.	328,275	215,592	18	0	6,456	4	0	209,136	14	0
110	Backblocks Roads, &c.	201,575	140,298	5	0	11,850	9	0	128,447	16	0
111	Road and other Works on Goldfields and Mineral Lands	50,600	36,761	3	4	..			36,761	3	4
	Development of Goldfields—										
112	Development of Goldfields	14,560	14,643	7	4	3,999	8	8	10,643	18	8
	Telegraph Extension—										
113	Telegraph Extension	225,000	284,120	12	10	32,745	19	2	251,374	13	8
	Contingent Defence—										
114	Contingent Defence	60,000	23,796	0	1	5	18	0	23,790	2	1
	Lands Improvement—										
115	Improved-farm Settlements	44,150	28,466	16	10	5,922	8	0	22,544	8	10
116	Lands, Miscellaneous	6,000	5	18	0	..			5	18	0
	Unauthorized—										
	Services not provided for	..	1,580	0	9	853	4	11	726	15	10
	Total Public Works Fund	2,830,500	2,493,023	1	11	114,483	16	5	2,378,539	5	6

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* Inclusive of £5,000 transferred from Vote 97.

† Exclusive of £5,000 transferred to Vote 95.

APPENDIX B.

STATEMENT of all LIABILITIES in respect of the Services of the Public Works Department outstanding at the Close of the Financial Year ended 31st March, 1913, prepared in Terms of Section 42 of the Public Revenues Act, 1910, and forwarded, as therein provided, to the Treasury.

Class.	Votes.	Summary.	Total. £	s.	d.
		PUBLIC WORKS FUND.			
XVI	92	Public Works, Departmental	566	16	8
XVII	93	Railways	111,899	3	0
XVIII	106	Lighthouses, Harbour Works, &c.	24	0	0
XIX	95–99	Public Buildings	76,120	18	1
XXIV	109–110	Construction of Roads, Bridges, &c.	161,359	0	0
			349,969	17	9
		CONSOLIDATED FUND.			
V	17–19	Public Buildings, Domains, and Maintenance of Roads	7,003	6	1
		OTHER ACCOUNTS.			
	123	Aid to Water-power Works Account	132,162	1	4
	124	Irrigation and Water Supply	50	0	0
	125	Waihou and Ohinemuri Rivers Improvement Account	8,050	1	1
	126	Opening up Crown Lands for Settlement Account	9,396	0	0
	127	National Endowment Account	1,293	0	0
	..	Land for Settlements Account	1,156	0	0
			152,107	2	5

Vote No.	Name of Vote.	Total. £	s.	d.
	PUBLIC WORKS FUND.			
92	Public Works, Departmental	566	16	8
93	Railway-construction—			
	Kaihu Railway Extension	397	16	9
	Kawakawa–Hokianga	..		
	Kawakawa–Grahamtown	..		
	North Auckland	6,401	1	3
	Huntly–Awaroa	3,646	17	1
	Waihi–Tauranga	3	0	0
	Tauranga–Paengaroa	3	0	0
	Gisborne–Motu	286	6	4
	Napier–Gisborne, North End	130	8	9
	Napier–Gisborne, South End	5	5	0
	Mount Egmont Branch	..		
	Stratford–Main Trunk	1,770	18	1
	Foxton – New Plymouth (Manawapou Deviation)	..		
	Raetihi–Main Trunk	..		
	South Island Main Trunk, North End	3,932	5	2
	South Island Main Trunk, South End	1,075	19	0
	Midland—			
	Nelson End	835	13	6
	Reefton End	..		
	Otira to Bealey	2,001	5	0
	Broken River to Bealey	5,813	10	11
	Westport–Inangahua	28,857	8	7
	Greymouth – Point Elizabeth	1,958	4	6
	Lawrence–Roxburgh	313	18	4
	Catlin's–Waimahaka	3,228	16	11
	Surveys of New Lines—			
	North Island	3	8	3
	South Island	..		
	Permanent-way Materials	51,233	19	7
		111,899	3	0
	Public Buildings—			
95	General	28,720	15	0
96	Judicial	10,760	17	11
97	Postal and Telegraph	29,970	3	7
98	Agricultural	323	7	9
99	Mental Hospitals	6,345	13	10
		76,120	18	1

APPENDIX B—*continued.*

STATEMENT of all LIABILITIES in respect of the Services of the Public Works Department—*continued.*

Vote No.	Name of Vote.	Total.		
	PUBLIC WORKS FUND—*continued.*	£	s.	d.
	Lighthouses, Harbour Works, &c.—			
106	Harbour Defences	24	0	0
	Construction of Roads, Bridges, &c.—			
109	Roads, &c.	116,183	0	0
110	Back-block Roads, &c.	45,176	0	0
		161,359	0	0
	Total, Public Works Fund	349,969	17	9
	CONSOLIDATED FUND.			
	Public Buildings, Domains, and Maintenance of Roads—			
17	Public Buildings	3,487	6	1
18	Government Domains	..		
19	Maintenance and Improvement of Roads..	3,516	0	0
		7,003	6	1
	OTHER ACCOUNTS.			
123	Aid to Water-power Works Account	132,162	1	4
124	Irrigation and Water-supply	50	0	0
	Waihou and Ohinemuri Rivers Improvement Account—			
125	Waihou and Ohinemuri Rivers Improvement	8,050	1	1
	Opening up Crown Lands for Settlement Account—			
126	Roads to open up Crown Lands	9,396	0	0
	National Endowment Account—			
127	Roads to open up National Endowment Lands	1,293	0	0
..	Land for Settlements Account (Roads Portion)	1,156	0	0
	Total, Other Accounts	£152.107	2	5

C. E. BENNETT,
Accountant.

H. J. H. BLOW,
Under-Secretary.

Public Works Department, 30th April, 1913.

APPENDIX C.

SCHEDULE of CONTRACTS CURRENT on the 1st April, 1912, and CONTRACTS ENTERED INTO by the Public Works Department during the Year ended 31st March, 1913.

Date of Contract.	Lines of Railway and Branches.	Name of Contract.	Name of Contractor.	Contract to be completed.	Date Contract was completed.	Amount of Contract.			Remarks.
			RAILWAYS.			£	s.	d.	
Jan. 6, 1912	Kaihu Railway Extension	Steel and Ironwork for Waima Bridges	Andersons Limited	July 6, 1912	Dec. 3, 1912	1,773	4	0	Reductions, £2 18s.
,, 9, ,,	,,	Hardwood Timber for Waima Bridges	J. W. Wallace and Co.	,, 9, ,,	..	1,437	2	0	
April 26, 1911	Kawakawa–Hokianga	,, for Ngapipito Bridges	Fraser and Co. (Limited)	Oct. 26, 1911	Nov. 27, 1912	845	0	2	,, £21 9s. 7d.
June 10, ,,	,,	Rolled Steel Joist-spans	Sanders Bros.	Jan. 10, 1912	April 15, ,,	1,041	8	9	Extras, £112 12s. 2d.
,, 12, ,,	,,	Steel and Ironwork for Ngapipito Bridges	Massey Bros. (Limited)	Dec. 12, 1911	June 3, ,,	670	14	9	Reductions, £29 16s. 4d.
,, 16, ,,	,,	Hardwood Timber for Bridges between 3 miles 40 chains and 11 miles 4 chains	Fraser and Co. (Limited)	,, 16, ,,	Nov. 27 ,,	978	18	5	Extras, £371 3s. 8d.
July 29, 1910	North Auckland Main Trunk	Hardwood Timber for Bridges	Dick Michael	Jan. 29, ,,	..	317	0	0	Reductions, £70 14s. 5d.
Feb. 13, 1911	,,	Otamatea Bridge	G. M. Fraser	Aug. 13, 1912	..	20,841	0	0	
June 12, ,,	,,	,, Wharf	,,	June 12, ,,	..	6,476	15	0	
Feb. 13, 1912	Huntly–Awaroa	Huntly Bridge	,,	May 13, ,,	..	17,580	6	0	
June 12, 1911	Tauranga–Paengaroa	Iron and Steel Supply	Sanders Bros.	Dec. 12, 1911	April 12, 1911	543	6	6	Extras, £35 4s. 4d.
,, 16, ,,	,,	Hardwood Piles and Timber for Bridges	Fraser and Co. (Limited)	,, 16, ,,	July 31, ,,	549	3	8	,, £6 7s. 10d.
Aug. 17, ,,	Gisborne–Motu	Land Plan Survey	A. Teesdale	Aug. 27, ,,	Jan. 13, 1912	260	0	0	,, £102 5s.
,, 16, ,,	,,	Hardwood Timber for Bridges	S. Brown (Limited)	Feb. 16, 1912	..	474	5	4	
Nov. 2, ,,	,,	Steel and Ironwork for Bridges	G. Griffiths and Co.	Aug. 2, ,,	Aug. 1, 1912	1,034	4	0	,, £36 17s.
Mar. 25, 1912	,,	Four Platelayers' Cottages, Matawai	E. P. Williams	June 25, ,,	Sept. 2, ,,	1,556	0	0	,, £2 10s.
Feb. 13, 1911	Stratford Main Trunk	Supply of Ironbark and Hardwood Timber for Bridges	S. Brown (Limited)	Aug. 13, 1911	Oct. 10, ,,	338	9	8	Reductions, £71 15s. 5d.
May 26, ,,	,,	Supply of Ironbark Piles and Mixed Hardwood for Bridges	,,	Nov. 26, ,,	,, 10, ,,	273	5	5	,, £21 11s. 3d.
June 9, ,,	,,	Supply of Steel and Ironwork for Bridges	Sanders Bros.	June 9, 1912	..	6,195	0	0	
Nov. 13, ,,	,,	Supply of Hardwood Timber and Piles for Bridges	Fraser and Co. (Limited)	May 13, ,,	..	829	7	9	
May 25, 1912	,,	Three Platelayers' Cottages, Ohakukara	O'Reilly and Miscall	Aug. 26, ,,	Nov. 30, 1912	1,128	15	7	Extras, £16 9s.
,, 29, ,,	,,	Whangamomona Station Buildings	E. W. Hodder	Mar. 1, 1913	..	3,990	0	0	Contract determined.
Oct. 10, ,,	,,	Hardwood, Whangamomona Stream Bridges	Richardson, Blair, and McCabe (Limited)	April 14, ,,	..	589	11	0	
Mar. 14, 1913	,,	Toi Road Station Cottages	F. Lundon	May 30, ,,	..	597	10	0	
July 11, 1911	South Island Main Trunk (South End)	Erection of Bridges, Mirza Section	B. Garnaham	Jan. 11, 1912	June 28, 1912	249	15	0	Extras, £51 18s.; reductions, £3 14s. 9d.
Dec. 21, ,,	Ditto	Parnassus Station Buildings	A. Kingsford	June 21, ,,	Nov. 9, ,,	2,652	12	11	,, £616 2s. 4d.; reductions, £195 12s. 6d.
Feb. 13, 1912	,,	Steel-plate Girders, Leader River Bridge	E. J. Ruddock	Aug. 13, ,,	..	879	5	8	
Oct. 15, ,,	,,	Ure River Bridge	B. Garnaham	June 15, 1913	..	3,858	18	0	
Feb. 26, ,,	Midland (Nelson End)	Glenhope Station Buildings	S. M. Galbraith	Aug. 26, 1912	Mar. 20, 1913	4,491	8	4	Extras, £209 17s. 6d.; reductions, £66 14s. 4d.

APPENDIX C—*continued*.

SCHEDULE of CONTRACTS CURRENT on the 1st April, 1912, and CONTRACTS ENTERED INTO by the Public Works Department during the Year ended 31st March, 1913—*continued*.

Date of Contract.	Lines of Railway and Branches.	Name of Contract.	Name of Contractor.	Contract to be completed.	Date Contract was completed.	Amount of Contract. £ s. d.	Remarks.
			RAILWAYS - *continued*.				
April 19, 1912	Midland (Nelson End)	Cottage at Kiwi	H. Olson	June 19, 1912	June 12, 1912	393 17 8	
Aug. 1, 1907	„ (Otira–Bealey)	Otira Tunnel	J. McLean and Sons (Limited)	Aug. 1, „	..	599,794 0 0	Contract determined, 28/12/12.
April 26, 1911	„ (Broken River–Bealey)	Supply of Ironbark Piles and Hardwood Timber, Bealey Bridges	J. A. Redpath and Son	Oct. 26, 1911	Sept. 13, 1912	824 6 8	
Feb. 19, 1912	Ditto	Supply of Steel and Ironwork for Bealey Bridges	P. R. Williamson	„ 19, 1912	..	1,471 19 2	
„ 19, „	„	Erection of Two Cottages at 37 miles 40 chains	Paynter and Hamilton	June 19, „	May 4, 1912	873 0 0	Extras, £31 2s. 6d.; reductions, £21 15s. 3d.
May 13, „	„	Bealey River, Halpin and Rough Creek Bridges	W. Rhodes and Son	..	..	1,554 4 6	Contract not taken up.
Jan. 3, 1913	„	Seven Cottages, Arthur's Pass Station	A. Kingsford	July 3, 1913	..	3,721 10 3	
May 5, 1910	Westport–Inangahua	No. 1 Formation Contract	McWilliams and Andrews	May 5, 1912	..	4,768 6 8	
„ 5, „	„	„ 2 „	D. McLellan	„ 5, „	..	5,406 0 0	
„ 5, „	„	„ 4 „	R. H. O'Brien and Party	„ 5, „	April 2, 1912	3,531 18 0	Additions, £57; reductions, £87.
„ 5, „	„	„ 5 „	McWilliams and Andrews	„ 5, „	Aug. 4, „	2,075 0 0	Extras, £105 14s.
„ 5, „	„	„ 6 „	R. H. O'Brien and Party	„ 5, „	April 2, „	1,944 6 8	„ £335 13s. 4d.; reductions, £110 15s. 8d.
Mar. 31, 1911	„	„ 7 „	Corby and Foster	Mar. 31, 1913	..	3,806 5 0	
„ 31, „	„	„ 10 „	Maxwell and Mann	„ 31, „	..	10,708 10 0	
„ 31, „	„	„ 12 „	Redmond, Moore, and Cochrane	„ 31, „	..	1,167 16 0	Determined, 19/11/12.
April 29, „	„	„ 8 „	T. Murphy, A. Senior, and D. McNamara	April 29, „	..	2,942 18 0	
„ 29, „	„	„ 9 „	Maxwell and Mann	„ 29, „	..	1,587 5 0	
May 25, „	„	„ 11 „	R. H. O'Brien	May 25, „	..	2,676 9 0	
Dec. 19, „	„	„ 14 „	D. McLellan	Dec. 19, 1913	..	8,565 5 0	
„ 19, „	„	„ 15 „	Murray and Co.	„ 19, „	..	1,186 12 6	
April 17, 1912	„	„ 13 „	J. A. Stuart, F. G. Hobbs, and S. McLennan	April 17, 1914	..	1,956 0 0	
„ 17, „	„	„ 16 „	Michael Leddy	„ 17, „	..	1,971 5 0	
„ 17, „	„	„ 17 „	Brazil and Party	„ 17, „	..	3,605 0 0	
May 20, „	„	Bushfelling and Clearing	Stuart and Gapper	Sept. 20, 1912	..	600 0 0	
Feb. 1, 1913	Greymouth – Point Elizabeth	Mount Davey Station Buildings	George Ogilvie	June 21, 1913	..	1,958 4 6	
Dec. 21, 1911	Lawrence–Roxburgh	No. 3 Formation, Beaumont Section	G. W. Ryan	Dec. 12, 1912	..	1,118 18 4	
July 1, 1912	Catlin's–Waimahaka	Land Plan Survey	R. S. Allan	Nov. 1, „	Mar. 10, 1913	215 14 0	
Aug. 8, „	„	Maclennan River Bridge	Watson, Rhodes, and Son	June 21, 1913	..	3,121 12 11	

APPENDIX C.—*continued.*

SCHEDULE of CONTRACTS CURRENT on the 1st April, 1912, and CONTRACTS ENTERED INTO by the Public Works Department during the Year ended 31st March, 1913—*continued.*

Date of Contract.	Name of Contract.	Contractor's Name and Address.	Date for Completion.	Date of Completion.	Amount of Contract. £	s.	d.	Amount of Extras and Reductions to be added to or deducted from Amount of Contract.
	AUCKLAND.	PUBLIC BUILDINGS.			£	s.	d.	
May 31, 1909	Auckland Post-office	Jamieson, J. and W. (Limited), Christchurch	Nov. 30, 1911	Oct. 22, 1912	95,551	0	0	Settlement not yet arrived at regarding extras and reductions.
June 26, 1911	Te Aroha Post-office	Frankham, C. H., Auckland	Feb. 26, 1912	April 15, ,,	2,962	0	0	Extras, £274 10s. 7d.; reductions £45.
,, 1, ,,	Auckland Post-office, Electric Elevators	Turnbull and Jones, Wellington	Mar. 1, ,,	Dec. 20, 1912	1,289	0	0	,, £784; reductions, £46 8s. 5d.
Nov. 6, ,,	Auckland Courthouse	Hutchison, W. E., Auckland	Nov. 6, ,,	..	14,820	0	0	
Dec. 21, ,,	Putaruru Post-office	Moody, A., Hamilton East	April 21, ,,	May 2, ,,	999	0	0	Extras, £13 3s. 4d.
,, 21, ,,	Ponsonby Post-office	McKinstry, L., Ponsonby, Auckland ..	Aug. 21, ,,	Jan. 18, 1913	3,697	18	6	,, £657 18s.
Jan. 3, 1912	Tokanui Mental Hospital	McLean and Sons, D., Wellington ..	July 3, ,,	..	13,627	0	0	
,, 13, ,,	Public Works Workshop	Philcox and Sons, W., Auckland ..	May 13, ,,	May 2, 1912	580	15	0	
Feb. 19, ,,	Devonport Post-office, Alterations	Morris, E., Auckland	April 19, ,,	,, 6, ,,	259	0	0	Extras, £5 5s.; reductions, £5 12s. 3d.
Jan. 16, ,,	Post-offices, Auckland and Wellington, Counter Grilles ..	Riley and Co., A. D., (Limited), Wellington	June 16, ,,	Nov. 2, ,,	917	0	0	,, £31 12s.; reductions, £4 12s.
Mar. 19, ,,	Hamilton Public Buildings	Snell Bros., Hamilton	Dec. 19, ,,	Jan. 29, 1913	5,180	0	0	,, £129 19s. 5d.
,, 19, ,,	Matamata Post-office	Moody, A., Hamilton East	Aug. 19, ,,	Aug. 6, 1912	1,177	0	0	,, £10 11s. 6d.
,, 29, ,,	Auckland New Post-office, Furniture, &c.	Winks and Hall, Auckland	June 19, ,,	Sept. 30, ,,	607	8	0	
,, 29, ,,	,, ,, ...	Tonson, Garlick, and Co., Auckland ..	,, 19, ,,	,, 30, ,,	313	3	9	
Aug. 30, 1911	Kaeo Post-office	Hare Bros., Kaeo	Jan. 30, ,,	May 4, ,,	833	10	0	Extras, £10.
,, 29, 1910	Matata Post-office	Grant, C. M., Opotiki	June 29, 1911	..	779	12	6	Completed by Public Works Department.
Aug. 19, 1911	Te Kuiti Police-station	McIndoe, J., Te Kuiti	Feb. 19, 1912	April 30, 1912	1,152	19	7	
Dec. 21, ,,	Taumarunui Police-station	Tolley and Robinson, Taumarunui ..	May 21, ,,	Aug. 27, ,,	1,276	4	0	Extras, £55 11s.; reductions, £5 2s.
Mar. 27, 1912	Waipu Police-station	Rowsell, W., Maungaturoto	June 27, ,,	,, 15, ,,	913	0	0	,, £14 4s. 6d.
April 17, ,,	Public Buildings, Auckland, Christchurch, and Dunedin, Fire-alarms	May-Oatway Syndicate (Limited), Dunedin	Sept. 13, ,,	Feb. 2, 1913	2,000	0	0	,, £23.
,, 19, ,,	Taumarunui Post-office, Additions and Alterations ..	Solloway, H. M., Taumarunui	May 20, ,,	Oct. 31, 1912	316	13	5	,, £21 10s. 6d.
May 20, ,,	Waihou Post-office	Fisk, G. A., Waihi	Sept. 20, ,,	Nov. 16, ,,	971	0	0	,, £6 4s. 9d.
,, 21, ,,	Rotorua Cottage Hospital	Frankham, J., Devonport	,, 21, ,,	Nov. 18, ,,	1,856	8	0	,, £196 6s. 6d.; reductions, £3 12s.
July 20, ,,	Waihi Police-station, Additions	Corringham, W. B., Waihi	,, 28, ,,	Feb. 2, 1913	343	0	0	,, £48 15s. 11d.
,, 20, ,,	Te Awamutu Post-office, Clock Tower	McKinstry, L., Ponsonby	Oct. 20, ,,	Dec. 5, 1912	498	19	0	,, £3; reductions, £4.
,, 24, ,,	Infectious Diseases Hospital, Rotorua	Moor, Thomas, Auckland	,, 24, ,,	,, 6, ,,	1,097	10	0	,, £10.
,, 24, ,,	Taupo Police-station, Additions and Alterations to Police-sergeant's residence)	Gradwell, F. C., Taupo	,, 24, ,,	Nov. 24, ,,	234	0	0	
Sept. 10, ,,	Kaikohe Courthouse	Cook, W., and Son, Waimate North ..	Jan. 10, 1913	..	949	0	0	
,, 19, ,,	Otorohanga Police-station	Fullerton and Wilson, Te Kuiti	Feb. 19, ,,	Mar. 15, 1913	925	0	0	Extras, £52 11s. 11d.
,, 19, ,,	Otahuhu Post-office, Additions	Morris, E., Auckland	,, 19, ,,	,, 20, ,,	656	0	0	,, £80 3s. 6d.
,, 19, ,,	Otorohanga Courthouse	Moody, A., Hamilton East	Jan. 19, ,,	Jan. 22, ,,	870	0	0	,, £10 2s.
Oct. 29, ,,	Defence Store, Mount Eden, Auckland	Jenkin, W. H., Grey Lynn	Dec. 9, 1912	Dec. 31, 1912	266	17	0	,, £4 18s.

APPENDIX C—*continued*.

SCHEDULE of CONTRACTS CURRENT on the 1st April, 1912, and CONTRACTS ENTERED INTO by the Public Works Department during the Year ended 31st March, 1913—*continued*.

Date of Contract.	Name of Contract.	Contractor's Name and Address.	Date for Completion.	Date of Completion.	Amount of Contract.	Amount of Extras and Reductions to be added to or deducted from Amount of Contract.
		PUBLIC BUILDINGS—*continued*.			£ s. d.	
	AUCKLAND—*continued*.					
Nov. 21, 1912	Matapihi Native School	Overton, F., Birkenhead	April 21, 1913	..	843 0 0	
,, 21, ,,	Maungatapu Native School	Harvey and Co., Tauranga	,, 21, ,,	..	600 0 0	
,, 20, ,,	Papakura Post-office	Mackay, A. M., Auckland	,, 20, ,,	..	1,194 2 0	
Mar. 7, 1913	Huntly Police-station	Frankham, C. H., Auckland	Aug. 7, ,,	..	1,390 0 0	
Dec. 28, 1912	Tokaanu Post-office	Aldridge, T., Ohakune	May 31, ,,	..	1,155 9 10	
Jan. 24, 1913	Pukehina Native School	Overton, F., Tauranga	June 24, ,,	..	861 0 0	
Oct. 16, 1912	Mental Hospital, Tokanui, Steam-boilers	Luke, S., and Co. (Limited), Wellington	Jan. 16, ,,	..	975 0 0	
	HAWKE'S BAY.					
Aug. 21, 1911	Police Inspector's Residence, Napier	Bailey, T. W., Napier	Jan. 21, 1912	Feb. 20, 1912	1,037 17 7	Extras, £39; deductions, £4 2s. 5d.
Jan. 13, 1912	Clive Post-office	Cairns and Paton, Havelock North	May 13, ,,	July 10, ,,	820 0 0	,, £26 15s.; deductions, £1 10s.
Mar. 16, ,,	Otane Post-office	Scanlon and Cain, Hastings	Aug. 16, ,,	Oct. 3, ,,	1,215 2 0	,, £36 13s. 9d.; deductions, £3 18s.
,, 20, ,,	Opotiki Post-office	Massey, W., Auckland	Oct. 20, ,,	Mar. 29, 1913	3,386 0 0	,, £38 9s.
June 15, ,,	Waipawa Courthouse, Repairs	Adams, J. H., Waipawa	Sept. 15, ,,	Sept. 25, 1912	229 15 0	,, £40 7s. 10d.; deductions, £11 11s. 4d.
Sept. 9, ,,	Gisborne Police-station	Webb, H., Gisborne	Feb. 8, 1913	..	2,306 0 0	
Oct. 23, ,,	Hastings Police Sergeant's Residence	Stanley, A. and R., Hastings	Feb. 23, ,,	Feb. 22, 1913	623 8 0	Deductions, £2 14s. 4d.
Jan. 1, 1913	Mohaka Police-station, Repairs	Gardiner, A. R., Wairoa	Mar. 28, ,,	..	247 3 7	
	TARANAKI.					
Nov. 27, 1911	Ohura Post-office	Tolley and Robinson, Taumarunui	July 27, 1912	Oct. 31, 1912	1,476 0 0	Extras, £3 17s. 6d; deductions, £94 12s. 3d.
Jan. 3, 1912	Inglewood Post-office, Additions, &c.	Coleman and Son, New Plymouth	Feb. 28, ,,	May 26, ,,	348 0 0	,, £2 11s.
,, 11, ,,	Whangamomona Post-office	Hodder, E. W., Whangamomona	May 11, ,,	Oct. 31, ,,	860 0 0	,, £11 6s. 6d.; deductions, £63.
Feb. 20, ,,	New Plymouth Public Buildings	Coleman and Son, New Plymouth	Nov. 20, ,,	Feb. 28, 1913	3,399 0 0	,, £20 10s; deductions, £151 12s.
Jan. 27, ,,	Whangamomona Movable School	Scott, R. J., Pohokura	Mar. 9, ,,	Aug. 3, 1912	204 15 6	
Sept. 12, ,,	Awakino Post-office	Coleman and Son, New Plymouth	Feb. 12, 1913	Mar. 31, 1913	1,513 0 0	Extras, £6.
	WELLINGTON.					
Oct. 27, 1909	Wellington Post-office, Additions	Wilson, J. and A. (Limited), Wellington	Oct. 27, 1911	April 16, 1913	96,923 0 0	Settlement not yet arrived at regarding extras and reductions.
April 11, 1911	St. Helens Hospital, Wellington	Murdock and Wallis, Wellington	Feb. 11, 1912	May 2, 1912	9,689 0 0	Extras, £482 10s. 11d.; deductions, £500.
June 21, ,,	New Store, Mount Cook	Sanders Bros., Wellington	Jan. 21, ,,	June 30, ,,	1,456 0 0	,, £1,855 10s. 8d.; deductions, £31 7s. 6d.
Aug. 1, ,,	Electric Elevators, General Post-office, Wellington	Burt, A. and T. (Limited), Wellington	Mar. 1, ,,	..	886 14 0	
Nov. 2, ,,	Marble Work, Wellington Post-office	Edwards and Son, Wellington	May 2, ,,	Nov. 25, 1912	227 19 0	Extras, £2.

APPENDIX C—*continued.*

SCHEDULE of CONTRACTS CURRENT on the 1st April, 1912, and CONTRACTS ENTERED INTO by the Public Works Department during the Year ended 31st March, 1913—*continued.*

Date of Contract.	Name of Contract.	Contractor's Name and Address.	Date for Completion.	Date of Completion.	Amount of Contract. £ s. d.	Amount of Extras and Reductions to be added to or deducted from Amount of Contract.
	WELLINGTON—*continued.*	PUBLIC BUILDINGS—*continued*				
Nov. 28, 1911	Carterton Post-office, Additions	Rose and Mason, Masterton	Feb. 28, 1912	June 8, 1912	415 0 0	Extras, £17 3s. 6d.
Aug. 1, „	Electric Elevators, Passenger-lifts A. and B., General Post-office, Wellington	Turnbull and Jones (Limited), Wellington	Mar. 1, „	Nov. 20, „	1,346 0 0	„ £342 13s.; deductions, £1 2s. 8d.
Jan. 19, 1912	Ohakune Courthouse	Aldridge, T., Ohakune	May 20, „	Oct. 31, „	667 8 6	„ £20 18s.
Feb. 19, „	Kaiwarawara Post-office	Seamer, A., Wellington	Aug. 19, „	Aug. 24, „	1,933 0 0	„ £82 3s.
April 11, „	Eketahuna Post-office, Additions	Power, A. R., Eketahuna	July 11, „	Dec. 21, „	418 11 0	„ £20 10s.
„ 17, „	Post and Telegraph Bulk Store, Wellington	Sanders Bros., Wellington	Jan. 17, 1913	..	11,652 0 0	
„ 22, „	Electric Elevator, St. Helens Hospital, Wellington	Moult, H., Wellington	Aug. 22, 1912	Nov. 19, 1912	443 0 0	
Aug. 24, „	Wanganui Post-office, Painting and Renovations	Tingey, R. and E. (Limited), Wanganui	Nov. 24, „	Sept. 24, „	312 0 0	
Oct. 3, „	Post and Telegraph Store, Wellington, 10-ton crane	Richardson, Blair, and McCabe, Wellington	..	..	518 10 0	
„ 3, „	„ „ 2½-ton crane	Riley, A. D., Wellington	..	..	353 0 0	
Sept. 2, „	Government Insurance Building, Wanganui	Benge, G. F., Wanganui	Mar. 2, 1913	..	1,610 0 0	
Oct. 17, „	Pongaroa Post-office, Additions	Whittaker, W., Pongaroa	Feb. 17, „	..	534 0 0	
Mar. 12, 1913	Wanganui Courthouse, Additions	Benge, G. F., Wanganui	July 12, „	..	1,175 0 0	
„ 18, „	Storekeeper's Cottage, Pipitea	McMillan, J. L., Wellington	June 18, „	..	669 0 0	
„ 31, „	Parliament Buildings, Granite for Piers	New Zealand Quarries (Limited), Auckland	„ 26, „	..	901 15 0	
	NELSON.					
Jan. 9, 1912	Murchison Police-station	Bredbury and Bastin, Murchison	May 9, 1912	Sept. 16, 1912	940 15 0	
Mar. 20, „	Stoke Industrial School (Boys)	Chamberlain and Stannard, Nelson	„ 15, „	June 11, ..	428 4 6	
„ 19, „	Postmaster's Residence, Takaka	Green, W. H., Takaka	July 19, „	Aug. 22, „	465 8 9	
„ 19, „	Takaka Courthouse	„ „	„ 19, „	Oct. 9, „	470 18 3	
April 19, „	Wakefield Police-station	Haase, E., and Son, Nelson	Sept. 19, „	Sept. 19, „	834 11 9	
„ 19, „	Stoke Industrial School, two Residences and Laundry	Robertson Bros., Nelson	Oct. 19, „	Oct. 16, „	1,586 3 8	
Sept. 4, „	„ Laundry Plant	Winn, S., Nelson	Nov. 13, „	Nov. 13, „	289 12 6	
„ 27, „	„ Latrines	Robertson Bros., Nelson	Dec. 20, „	..	224 12 3	
Dec. 31, „	Nelson Post-office, Additions	Galbraith, S. M., Nelson	June 31, „	..	395 0 0	
Mar. 29, 1913	Wakapuaka Cable-station, Water-supply and Drainage	Grimmett, T. R. J., Nelson	Aug. 1, 1913	..	682 5 3	
	WESTPORT.					
June 20, 1910	Westport Post-office	Brynildsen, E., Westport	June 20, 1911	May 27, 1912	6,166 17 0	Extras, £1,107 14s. 6d.; deductions, £251 16s.
Feb. 20, 1911	Westport Post-office, Clock and Bells	Littlejohn, W., and Son, Wellington	Open	April 1, „	645 0 0	
Dec. 22, „	Westport Post-office, Furniture and Fittings	Fraser, D., Westport	Feb. 22, 1912	May 10, „	313 12 6	Extras, £8 1s.
Oct. 9, 1912	Millerton Post-office, Additions, &c.	Rees and Hunter, Westport	„ 9, 1913	Mar. 31, 1913	673 16 6	„ £24 14s.
	WESTLAND.					
July 31, 1911	Greymouth Courthouse	Kelsall and Son, Greymouth	May 31, 1912	Dec. 21, 1912	5,912 8 8	Extras, £659 12s.; deductions, £192.
Jan. 22, 1912	Hokitika Public Buildings, Extension	Drake, J., Greymouth	Sept. 22, „	..	5,016 13 5	
Sept. 6, „	Public Trust Building, Greymouth	Cundy, A., Greymouth	„ 6, „	Oct. 15, 1912	1,449 6 0	Extras, £78 9s. 1d.
Aug. 2, „	Cobden Police-station	Mordaunt, R., Cobden	Aug. 10, „	..	773 18 2	

APPENDIX C—*continued.*

SCHEDULE of CONTRACTS CURRENT on the 1st April, 1912, and CONTRACTS ENTERED INTO by the Public Works Department during the Year ended 31st March, 1913—*continued.*

Date of Contract.	Name of Contract.	Contractor's Name and Address.	Date for Completion.	Date of Completion.	Amount of Contract. £	s.	d.	Amount of Extras and Reductions to be added to or deducted from Amount of Contract.
		PUBLIC BUILDINGS—*continued.*						
	CANTERBURY.							
Sept. 1, 1910	Departmental Buildings, Christchurch	Jamieson, J. and W. (Limited), Christchurch	May 1, 1912	..	53,564	0	0	
April 20, 1911	Waimate Post-office Clock and Chimes	Littlejohn, W., and Sons, Wellington ..	Open	Aug. 16, 1912	545	0	0	
June 15, ,,	Sydenham Post-office	Taylor, Joseph, Linwood	April 15, 1912	,, 31, ,,	4,450	0	0	Extras, £218 6s. 11d.
Nov. 4, ,,	Lyttelton Post-office, Raising Clock-tower, and Alterations	Calvert Charles, Sydenham	Jan. 4, ,,	April 27, ,,	584	10	0	,, £142 2s. 6d.
,, 14, ,,	Mount Cook New Hermitage, Supply and Delivery of Doors and Windows	Jackson, John, and Co. (Limited), Timaru	Sept. 14, ,,	..	374	7	6	
Dec. 21, ,,	Waiau, Lineman's Cottage	Anderson, George, Waiau	Mar. 21, ,,	May 18, 1912	420	0	0	Extras, £66 12s. 6d.; deductions, £7 5s.
Jan. 6, 1912	Clock for Timaru Post-office..	Littlejohn, W., and Son, Wellington ..	June 6, ,,	..	650	0	0	
Feb. 17, ,,	Addington Post-office Clock-tower	Taylor, Joseph, Linwood	,, 17, ,,	June 28, 1912	309	10	0	Extras, £6 6s. 6d.
,, 19, ,,	Sumner Post-office, Alterations and Additions	Dibnah and Gant, Woolston	April 29, ,,	,, 6, ,,	412	0	0	,, £55 5s. 6d.
Mar. 7, ,,	Pleasant Point Post-office	Miller Bros., Timaru	July 12, ,,	Nov. 9, ,,	1,153	15	0	,, £41 17s.
,, 16, ,,	Sumner Deaf-mutes Institution, Additions and Alterations	Calvert, Charles, Sydenham	Jan. 16, 1913	..	3,445	5	0	
,, 16, ,,	Christchurch Police-station, Lockup and Store.. ..	White, George, Linwood	May 25, 1912	May 14, ,,	269	0	0	,, £8 8s.
,, 16, ,,	Ashburton Police-station, Offices and Quarters.. ..	Vesty, H. A., Ashburton	April 27, ,,	Aug. 10, ,,	434	19	0	,, £7 10s.; deductions, £8 5s. 6d.
April 18, ,,	Temuka Police-station	McKinnon, James, Temuka	Aug. 18, ,,	Feb. 2, 1913	796	0	0	,, £171 8s. 3d.
,, 23, ,,	Addington Post-office Clock	Littlejohn and Son, Wellington	Feb. 23, 1913	..	325	0	0	
May 10, ,,	Mount Cook Hermitage, New Hostel, Stamped Steel Ceilings	Bruce, A. S., Christchurch	Nov. 30, 1912	..	560	0	0	
,, 22, ,,	Methven Courthouse	Aitken, K., and Co., Methven	Sept. 28, ,,	Nov. 9, 1912	650	0	10	Extras, £24 2s. 8d.
,, 27, ,,	Timaru Gaoler's Quarters, Additions	Donald, J., Timaru	Aug. 4, ,,	Oct. 14, ,,	402	15	0	,, £65 5s. 2d.
Oct. 12, ,,	Islington Police-station	Blogg, F., Christchurch	Feb. 12, 1913	Mar. 12, 1913	576	1	8	,, £105 18s. 7d.; deductions, £15 13s. 7d.
Dec. 23, ,,	Christchurch Departmental Buildings, Electric Wiring ..	Turnbull and Jones, Wellington	,, 28, ,,	..	1,041	16	0	
Jan. 3, 1913	Police Sergeant's Residence, Ashburton	Pearce, F., Ashburton	May 3, ,,	..	776	0	0	
,, 3, ,,	Mount Cook Hostel, Plumbing and Gasfitting	Jones, C., Christchurch	,, 31, ,,	..	600	0	0	
Feb. 2, ,,	Christchurch Departmental Buildings, Fire-alarms ..	Stringer and Bridge, Christchurch ..	..	..	295	16	8	
,, 20, ,,	Mount Cook Hostel, Painting and Glazing	Donn, W., Timaru	May 31, 1913	..	308	2	8	
Mar. 3, ,,	Fairlie Post-office, Additions, &c.	Foden, T., and Sons, Fairlie	,, 12, ,,	..	430	14	4	
	OTAGO AND SOUTHLAND.							
April 14, 1910	Departmental Buildings, Invercargill	Shields and Andrews, Invercargill ..	April 14, 1911	Jan. 31, 1912	12,380	0	0	Extras, £1,050; deductions, £158.
,, 18, 1911	Kaitangata Post-office	Watson, Rhodes, and Son., Dunedin ..	Oct. 18, ,,	July 15, ,,	2,159	14	1	,, £199 19s. 9d.; deductions, £28 2s. 4d.
,, 4, ,,	Balclutha Post-office	Hunter, P., Balclutha	Nov. 4, ,,	,, 19, ,,	2,397	0	0	,, £95 2s.
Jan. 19, 1912	Seacliff Mental Hospital, Water-supply	Burt, A. and T. (Limited), Dunedin ..	July 19, 1912	..	5,215	0	0	
Feb. 19, ..	St. Helens Hospital, Dunedin, Isolation Ward ..	White, J. E., Dunedin	June 19, ,,	Sept. 30, ,,	597	10	0	,, £22 10s. 6d.; deductions, £23 10s.
,, 19, ,,	Balfour Post-office	Latham, T., Gore	May 19, ,,	Nov. 16, ,,	699	15	0	

APPENDIX C—*continued.*

SCHEDULE of CONTRACTS CURRENT on the 1st April, 1912, and CONTRACTS ENTERED INTO by the Public Works Department during the Year ended 31st March, 1913—*continued.*

Date of Contract.	Name of Contract.	Contractor's Name and Address.	Date for Completion.	Date of Completion.	Amount of Contract. £	s.	d.	Amount of Extras and Reductions to be added to or deducted from Amount of Contract.
	OTAGO AND SOUTHLAND—*continued.*	PUBLIC BUILDINGS—*continued.*						
Feb. 11, 1912	Hawea Flat Post-office	Wilkinson, Thomas, Clyde	June 11, 1912	Aug. 3, 1912	495	9	0	
May 13, ,,	Oamaru Courthouse, Repairs and Renovations	Tait, James, Oamaru	July 8, ,,	Sept. 7, ,,	236	7	5	
June 21, ,,	Quarantine-station, Port Chalmers, Repairs	Love Bros., Port Chalmers	Sept. 21, ,,	Nov. 20, ,,	461	18	0	
July 22, ,,	Queenstown Domain Gardener's Cottage, Repairs, &c.	Bowden, T. F., Arrowtown	.. 22, ,,	Mar. 28, 1913	395	0	0	Extras, £105 7s.
Aug. 2, ,,	Ravensbourne Post-office	Dempster, A., Dunedin	Feb. 2, 1913	,, 20, ,,	1,328	0	0	,, £6.
Oct. 3, ,,	Mental Hospital, Waitati, Plumbing and Hot-water Service	Scott, J. and R., Dunedin	Mar. 3, ,,	..	334	0	0	
,, 22, ,,	Gore Post-office, Restoration	Rhodes, T., and Son, Gore	Jan. 31, ,,	..	799	0	0	
Nov. 11, ,,	Tapanui Police-station	Meikle, R., jun., Kelso	..	..	719	0	0	Contract not taken up.
Dec. 30, ,,	Roxburgh Post-office	Christie, R., Roxburgh	May 30, ,,	..	1,650	0	0	
Mar. 31, 1913	Mataura Police-station	Latham, A., Gore	July 31, ,,	..	760	10	6	
		DEVELOPMENT OF WATER-POWER.						
	LAKE COLERIDGE SCHEME.							
Feb. 16, 1912	Lake Coleridge Tunnel	McWilliams, J., Wellington	Aug. 16, 1913	..	53,172	13	0	
,, 17, ,,	Erection of Eight Cottages	Mills and Kepple, Christchurch	Oct. 17, 1912	Feb. 28, 1913	2,846	19	1	Extras, £28 14s.; deductions, £24 16s. 3d.
June 12, ,,	Section 3, Pipe-lines and Accessories	Dunedin Engineering and Steel Company (Limited), Dunedin	June 12, 1913	..	17,623	13	6	
,, 12, ,,	,, 7, Transformers	National Electrical and Engineering Company (Limited), Dunedin	April 12, ,,	..	9,673	0	0	
,, 12, ,,	,, 19, Travelling-crane	Greenshields, F. S., and Co., Wellington	,, 12, ,,	..	646	0	0	
July 10, ,,	,, 11, Bare Conductors	Richardson, Blair, and McCabe (Limited), Wellington	July 10, ,,	..	13,100	15	9	
,, 18, ,,	,, 21 Batteries and Accessories	Turnbull and Jones (Limited), Wellington	,, 18, ,,	..	839	12	0	
,, 23, ,,	,, 15 Testing Transformers	,, ,, ,,	May 23, ,,	..	525	0	0	
,, 26, ,,	,, 16 Meters	Burt, A. and T. (Limited), Wellington	July 26, ,,	..	291	15	6	
,, 23, ,,	,, 12 Insulated Cables	Baillie, P. R., and Co., Wellington	,, 23, ,,	..	3,765	1	0	
,, 24, ,,	,, 9 Transmission-line Insulators	National Electrical and Engineering Company (Limited), Dunedin	Mar. 24, ,,	..	3,795	0	0	
Aug. 13, ,,	Tunnel and Penstock Gates	Richardson, Blair, and McCabe (Limited), Wellington	Aug. 13, ,,	..	1,336	0	0	
,, 13, ,,	Section 8, Lightning-arrestors	National Electrical and Engineering Company (Limited), Dunedin	May 13, ,,	..	2,588	0	0	
,, 13, ,,	,, 13, Distributing-system Insulators	Brown, S. (Limited), Wellington	April 13, ,,	..	668	0	6	
,, 21, ,,	,, 3A, Valves and Expansion-joints	Dunedin Engineering and Steel Company (Limited), Dunedin	June 21, ,,	..	837	0	0	
,, 14, ,,	,, 5, Generators and Accessories	Thorne, George Grey, Auckland	May 21, ,,	..	5,561	0	0	
,, 14, ,,	,, 4, Water-wheels and Accessories	Australian Metal Company (Limited), Melbourne	,, 21, ,,	..	4,195	0	0	

APPENDIX C—*continued.*

SCHEDULE of Contracts current on the 1st April, 1912, and Contracts entered into by the Public Works Department during the Year ended 31st March, 1913—*continued.*

Date of Contract.	Name of Contract.	Contractor's Name and Address.	Date for Completion.	Date of Completion.	Amount of Contract.	Amount of Extras and Reductions to be added to or deducted from Amount of Contract.
		DEVELOPMENT OF WATER-POWER—*continued.*				
	Lake Coleridge Scheme—*continued.*				£ s. d.	
Sept. 19, 1912	Section 23, Two Motor-cars ("Calthorpe")	Dalgety and Co. (Limited), Wellington	Feb. 6, 1913	Mar. 4, 1913	962 0 0	
,, 19, ,,	,, 23, Two Motor-lorries ("Albion")	Grapes and Riley, Wellington	,, 6, ,,	..	1,106 4 6	
,, 12, ,,	,, 22, 150 Tons Bitumen	Neuchatel Asphalt Company (Limited), Wellington	May 12, ,,	Mar. 21, ,,	1,087 10 0	Reductions, £13 12s. 2d.
Oct. 22, ,,	,, 10D, 500 Hardwood Poles delivered Lyttelton	Mitchelson and Co., Auckland	Oct. 22, ,,	..	1,050 0 0	
Nov. 11, ,,	,, 10E, 1,200 Ironbark Piles, delivered Lyttelton	Wallace, J. W., and Co., Wellington	Nov. 11, ,,	..	4,200 0 0	
Dec. 23, ,,	Power-station	Taylor Bros. and Muirhead, Christchurch	Oct. 23, ,,	..	15,635 2 6	
Feb. 10, ,,	Section 2, Cable-clamps	National Electrical and Engineering Company (Limited), Dunedin	,, 10, ,,	..	884 0 0	
Mar. 25, ,,	,, 20, Cross-arms	Duncan, P. and D., Christchurch	Dec. 25, ,,	..	512 0 0	
,, 3, ,,	Electric Wiring at Power-house	Tolley and Son (Limited), Wellington	Sept. 3, ,,	..	312 13 2	
	Waihou and Ohinemuri River Improvements.					
Jan. 12, 1912	Ngararaki and Koutou Cuts	Lupis, T., Paeroa	Oct. 12, 1912	..	9,872 1 0	
Feb. 21, 1913	Paeroa Stop-bank	Treanor, P., Paeroa	Aug. 21, 1913	..	2,053 12 0	
,, 7, ,,	Steam-engine and Condensing-plant for Waihou Dredge	Greenshields, F. S., and Co., Wellington	Sept. 7, ,,	..	772 0 0	
		ROAD WORKS.				
	Auckland.					
June 16, 1911	Waimana River Bridge (Opouriao)	Dixon, J. D., Cambridge	Sept. 16, 1912	..	1,630 10 0	
Aug. 16, ,,	Tongariro River Bridge	McLeod, Robert A., Auckland	May 16, ,,	Oct. 9, 1912	1,273 2 11	Extras, £25 11s. 10d.
Nov. 6, ,,	Marakopa River Bridge	Scott and Forsyth, Te Kuiti	Aug. 6, ,,	June 4, ,,	536 16 11	
,, 6, ,,	Wairoa Road District Bridges	James Bros., Auckland	May 6, ,,	,, 6, ,,	791 15 10	Extras, £45.
,, 9, ,,	Waioeka River Bridge (Suspension)	Austin and Mead, Gisborne	Feb. 9, ,,	..	407 10 0	
,, 14, ,,	Te Kuiti - Mokau Road, Supply of 6,000 cubic feet Crushed Limestone Metal	Fouhy, P., King-country	Jan. 23, ,,	..	485 3 4	Determined Deductions, £280 1s. 6d.
Mar. 8, 1912	Oparau River Bridge	Scott and Forsyth, Te Kuiti	Dec. 8, ,,	..	1,601 16 8	
,, 11, ,,	Waioeka River Suspension Stock Bridge, Okuraata Crossing	Short and Gunn, Gisborne	July 11, ,,	Sept. 17, 1912	478 0 0	Extras, £5.
April 2, ,,	Mangapoike Road Bridge, No. 1	Baynes, W., Gisborne	April 2, ,,	..	652 0 0	
,, 2, ,,	,, No. 2	,, ,,	,, 2, ,,	..	433 0 0	
May 20, ,,	Mangaiti Road Bridge	Poole, E., Te Kuiti	Sept. 20, ,,	Nov. 25, 1912	354 0 0	
June 13, ,,	Mangawhero River Road Bridge	Scott and Forsyth, Te Kuiti	,, 13, ,,	Sept. 20, ,,	220 11 0	
Feb. 6, 1913	Awaroa River Bridge (Erection)	McLeod, R. A., Auckland	May 20, 1913	..	321 0 0	
,, 10, ,,	Raukituri River Bridges (Boothman's)	Langlands, H. W., Gisborne	June 20, ,,	..	385 19 0	
Mar. 17, ,,	Mangakahia River Bridge	Webster, W. A., Rawene	Mar. 17, ,,	..	1,651 0 0	

APPENDIX C—*continued.*

SCHEDULE of CONTRACTS CURRENT on the 1st April, 1912, and CONTRACTS ENTERED INTO by the Public Works Department during the Year ended 31st March, 1913—*continued.*

ROAD WORKS—*continued.*

Date of Contract.	Name of Contract.	Contractor's Name and Address.	Date for Completion.	Date of Completion.	Amount of Contract. £ s. d.	Amount of Extras and Reductions to be added to or deducted from Amount of Contract.
	HAWKE'S BAY.					
Dec. 30, 1910	Nuhaka River Bridge	Gardiner, A. R., Wairoa	Oct. 30, 1911	May 25, 1912	3,136 4 0	Extras, £12; deductions, £214 4s. 5d.
April 19, 1911	Tongoio Lagoon (Deviation), Bridge-construction	McGaffin, R., Hastings	Dec. 19, „	July 4, „	1,317 17 6	
„ 19, „	„ „ Embankment and Road Formation	„ „	Feb. 19, 1912	„ 4, „	1,950 0 0	
	TARANAKI.					
June 21, 1910	Tangarakau River Suspension Bridge	Grayling, F. M., New Plymouth	June 21, 1911	Aug. 2, 1911	1,553 0 0	Extras, £25.
Nov. 13, „	Hardwood Timber and Piles for Tangarakau Road Bridges, Lower and Middle Crossings	Fraser and Co., Grafton, N.S.W.	April 13, 1912	Mar. 14, 1913	533 19 2	Deductions, 14s. 7d.
April 19, 1912	Matau River Bridge (Graham's)	Sangster, G., Stratford	April 19, 1913	..	596 0 0	
May 20, „	Mangaturuturu Stream Bridge	Wallace and Thompson, Rangataua	Feb. 20, „	..	462 17 9	
Aug. 27, „	Moki Stream Road Bridge (Hardwood Timber)	Wallace, J. W., and Co., Wellington	„ 31, 1912	..	207 17 5	
Dec. 30, „	Tangarakau River Bridges, Ohoura Road Lower and Middle Crossings	Grayling, F. M., New Plymouth	June 30, 1913	..	1,107 0 0	
Nov. 21, „	Mangahowhai Stream Bridge	Kensington, H., Wanganui	May 21, „	..	540 14 3	
Feb. 2, „	Mangapeehi and Mokau Road Bridges	Salt, W., Wanganui	Aug. 19, „	..	687 17 0	
	WELLINGTON.					
Feb. 21, 1912	Rokau Block Road Formation	Saunders, J. S., Wellington	June 19, 1912	..	498 10 0	Contract cancelled, 27th Sept.
Sept. 27, „	„	Carmichael, A., Dannevirke	Dec. 20, „	Jan. 16, 1913	402 10 10	Extras, £5 0s. 6d.
	MARLBOROUGH.					
Jan. 6, 1912	Kahautara River Bridge, Kaikoura County	McLean, D., and Sons, Wellington	April 6, 1913	..	3,255 0 0	
	NELSON.					
Mar. 27, 1911	Metalling Road, Mokihinui to Little Wanganui	Davis, Fraser, and Hyndman, St. Helens, Westport	Aug. 27, 1911	..	1,644 2 6	
May 8, „	Mokihinui to Little Wanganui Road, No. 2, Road-metalling	H. Langlands and E. Morris, St. Helens, Westport	Sept. 8, „	July 31, 1912	820 18 9	Extras, £80 17s. 2d.
Nov. 17, „	Mokihinui River Bridge (Approaches)	Flight and McMaster, Nikau	Jan. 25, 1912	April 19, „	224 15 0	„ £53 11s. 6d.
„ 17, „	Glasseye Creek Bridge	Hill, L., Little Wanganui	„ 17, „	Aug. 31, „	259 1 7	
Jan. 10, 1912	Mokihinui–Little Wanganui Road, No. 2, Formation Contract	Flight and McMaster, Nikau	May 10, „	„ 24, „	440 0 0	Extras, £68 8s. 10d.; deductions, £12 16s. 3d.
„ 12, „	Maruia River Bridge	Atkinson, S. R., Westport	Sept. 12, „	..	2,061 8 6	
„ 18, „	Rai and Brown River Bridges (Approaches)	McKenzie Carrying Company (Limited), Blenheim	April 18, „	Sept. 18, 1912	497 15 11	
„ 20, „	Mokihinui – Little Wanganui Road, No. 3, Formation	Smith, Fraser, and Hyndman, St. Helens, Westport	May 20, „	..	271 0 0	

APPENDIX C—*continued.*

SCHEDULE of CONTRACTS CURRENT on the 1st April, 1912, and CONTRACTS ENTERED INTO by the Public Works Department during the Year ended 31st March, 1913—*continued.*

Date of Contract.	Name of Contract.	Contractor's Name and Address.	Date for Completion.	Date of Completion.	Amount of Contract. £	s.	d.	Amount of Extras and Reductions to be added to or deducted from Amount of Contract.
		ROAD WORKS—*continued.*						
	NELSON—*continued.*							
Jan. 20, 1912	Mokihinui–Little Wanganui Road, No. 4 Formation ..	Smith, Fraser, and Hyndman, St. Helens, Westport	May 20, 1912	Nov. 23, 1912	268	0	0	Extras, £32 10s.
„ 20, „	„ „ No. 5 Formation ..	Neilsen and Merchant, Te Namu.. ..	„ 20, „	Sept. 28, „	354	0	0	„ £12 1s. 8d.
Mar. 7, „	Matakitaka River Suspension Stock Bridge, Murchison County	Sigley, J., Greymouth	Sept. 7, „	Oct. 16, „	419	9	0	
Feb. 27, „	Mangles River Bridge (2 ft. Suspension Bridge) ..	Downie Bros., Murchison	Aug. 27, „	Mar. 1, 1913	385	12	10	
„ 27, „	Blackwater River Road Bridge	„ „	„ 27, „	Sept. 25, 1912	459	10	0	Extras, £45 15s.
Mar. 20, „	Little Hope River Road Bridge	Galbraith, S. M., Nelson	„ 20, „	Jan. 20, 1913	281	18	0	
May 21, „	Onekaka Road Bridge	Olson, H., Nelson	Nov. 21, „	..	299	0	0	
„ 21, „	Takaka River Bridge	Sigley, J., Greymouth	May 21, 1913	..	3,322	3	6	
Aug. 20, „	Motueka River Bridge, Whatu (Repairs)	Dixon, Charles, Nelson	Nov. 20, 1912	Jan. 31, 1913	1,254	5	0	Extras, £170.
Sept. 27, „	Wangapeka River Road Bridge	„ „	Sept. 27, 1913	..	2,171	16	8	
	WESTLAND.							
Mar. 15, 1910	Big Wanganui Bridge, South Westland	O'Donnell, J., Wellington	Mar. 15, 1912	Dec. 31, 1912	7,908	4	7	Extras, £2,137 5s. 1d.
Jan. 11, 1912	South Approach, Big Wanganui Road Bridge	Haddock and Moye, Ross	July 11, „	..	989	0	0	
	CANTERBURY.							
June 12, 1911	Bealey Gorge Road Bridge	Watson, Rhodes, and Son	April 12, 1912	May 4, 1912	1,192	11	0	Extras, £298 2s. 6d.
Jan. 16, 1912	Douglas Settlement, Road-metalling Yards Road ..	White, R., Waimate	Mar. 12, „	April 8, „	208	5	0	Reductions, £10 7s.
„ 16, „	„ „ Ritchie Road ..	„ „	„ 12, „	„ 23, „	553	7	0	„ £12 12s.
„ 16, „	„ „ Willow Road ..	Cochrane, W., Waimate	April 9, „	..	617	13	3	
Mar. 25, „	Hooker River and Glencoe Stream Bridges Erection ..	Sinclair, James, Oamaru	Nov. 30, „	..	444	14	0	
Nov. 25, „	Conway Gorge Road-formation, Section 1	Abraham, E., Kaikoura	Mar. 17, „	..	484	12	0	
„ 25, „	„ „ 2	„ „	„ 17, „	..	504	0	0	
„ 6, „	„ „ 3	„ „	Feb. 26, „	..	294	15	0	
Feb. 20, „	Waimate Settlement Road, Formation and Metalling ..	White, R., Waimate	May 15, „	..	508	12	9	
Mar. 5, „	Scargill Settlement, Metalling	Lochhead and Clarke, Cheviot	„ 28, „	..	282	3	4	
	OTAGO AND SOUTHLAND.							
Mar. 4, 1911	Hardwood Timber, Taieri Mouth Bridge	Millar's West Australian Hardwood Company (Limited), Wellington	Sept. 4, 1911	May 18, 1912	1,254	4	7	
„ 29, „	Ermidale Settlement, Road-metalling..	Baird, W., East Invercargill	„ 18, „	Aug. 24, 1911	1,363	0	0	
Aug. 31, „	Waiau River Bridge (Southland)	Everitt and Heffernan, Wellington ..	Nov. 31, 1912	..	3,844	1	0	
Feb. 16, 1912	Riley and McLeery, Road-formation	Parlane, W., Orepuki	April 30, „	July 23, 1912	203	0	0	
Jan. 9, 1913	Round Hill to Pahia Road	Pemberton, V., Invercargill	„ 5, 1913	..	262	4	0	
		MISCELLANEOUS.						
Mar. 11, 1912	Training-wall at Karamea, No. 3 Contract	Hill and Jones, Westport	Sept. 11, 1912	Nov. 15, 1912	2,602	9	9	
Aug. 21, „	300 Ironbark Piles	Brown, S. (Limited), Wellington	May 21, 1913	..	1,289	1	4	
Nov. 29, „	400 Bedsteads for Mental Hospitals	Wallace, J. W., and Co., Wellington ..	Nov. 29, „	..	750	0	0	

APPENDIX D.

SCHEDULE of SLEEPER CONTRACTS CURRENT on 1st April, 1912, and CONTRACTS ENTERED INTO by the Public Works Department during the Year ended 31st March, 1913, showing Deliveries to the latter Date.

NORTH ISLAND.

WHANGAREI DISTRICT.

Date of Contract or Agreement.	Contractor's Name.	Address.	Number of Sleepers contracted for, and Class of Timber.	Rate per Sleeper.	Place of Delivery.	Date for Completion.	Total delivered to Date.	Date of Completion.
				s. d.				
21 Oct., 1910 ..	Pullman and Leslie	Matapouri	1,000 puriri ..	4 3	Opua	27 Dec., 1910..	698 puriri	Cancelled.
20 Jan., 1911 ..	E. Brenstrum	Dargaville	900 ,, ..	3 11	,, ...	30 June, 1911..	900 ,,	22 Nov., 1912.
27 ,, ,, ..	G. N. Le Clere	Parua Bay	1,000 ,, .. 36 crossing	4 6 20s. per 100 ft.	Onerahi.. ..	30 ,, ,, ..	1,000 ,, 36 crossing	31 Mar., 1913.
2 Mar., ,, ..	V. Trounson	Maropiu ..	500 puriri .. 1,000 totara ..	3 9 3 3	Maropiu Station ..	30 ,, ,, ..	270 puriri 1,093 totara	
18 April, ,, ..	T. M. Lane and Sons ..	Opua ..	1,500 puriri .. 10 sets crossing ..	4 0 21s. per 100 ft.	Opua	18 Oct., ,, ..	1,500 puriri 356 crossing	3 May, 1912.
23 June	James Gamble	Otiria ..	150 totara .. 150 puriri ..	2 6 3 6	Otiria	23 Sept., ,, ..	116 totara 1,185 puriri	Completed.
13 July ,, ..	Pickens Bros.	Punaruku	2,000 totara ..	4 0	Opua	13 Oct., ,, ..	1,168 totara	
20 ,, ,, ..	S. Doak	Mangatu	1,500 ,, ..	3 6	Kaihu	20 Dec., ,, ..	1,378 ,,	
20 ,, ,, ..	G. E. Dudding	Kaihu	1,000 ,, ..	3 6	,, ...	20 ,, ,, ..	616 ,,	
20 ,, ,, ..	F. Johansen	Mangatu	600 puriri ..	4 3	,, ...	20 Feb., 1912..	711 puriri	Completed.
5 Aug., ,, ..	Tinioko and others	Otiria	3,000 ,, ..	4 6	Otiria	31 Mar., ,, ..	1,736 ,,	
8 Sept. ,, ..	G. N. Le Clere	Parua Bay	2,000 ,, ..	4 6	Onerahi.. ..	31 Dec., 1911..	884 ..	
12 Mar., ,, ..	J. W. Edmonds	Ngawha	800 ,, ..	3 6	Kaikohe Railway 11/20	30 June, ,, ..	38 ..	
Various ..	Various	Various	1,411 puriri and totara	3/-, 3/6, 4/3, and 4/6	Various ..	Various ..	1,411	

AUCKLAND DISTRICT.

Date of Contract or Agreement.	Contractor's Name.	Address.	Number of Sleepers contracted for, and Class of Timber.	Rate per Sleeper.	Place of Delivery.	Date for Completion.	Total delivered to Date.	Date of Completion.
				s. d.				
27 Jan., 1909 ..	E. Brenstrum	Dargaville	1,200 puriri ..	4 3	Helensville ..	27 July, 1909..	412	In hand.
30 Sept., 1910 ..	Fraser and Co.	Grafton, N.S.W. ..	600, 7 ft. 6 in. by 8 in. by 6 in., ironbark	5 0	Auckland ..	1 ,, 1910..	572	,,
30 ,, ,, ..	Moir and Resta	Puhoi	3,000 totara ..	3 3	Ahuroa	9 Sept., 1911..	Nil	,,
6 Dec., ,, ..	E. Brenstrum	Dargaville	350 puriri ..	4 3	Helensville ..	20 Mar., ,, ..	,,	,,
..	S. Brown (Limited)	Wellington	350, 11 ft. by 8 in. by 6 in., ironbark	9 3	..	31 July, ,, ..	353	Completed, 7 June, 1912.
..	Richardson, Blair and McCabe, (Limited)	Wellington ..	4,000 hardwood ..	4 6	Auckland ..	..	4,000	Completed, 6 Jan., 1913.
22 Aug., 1912 ..	Ditto	,, ..	20,000 ,, ..	4 10	,, ..	22 Aug., 1913..	3,165	
22 ,, ,, ..	Millar's West Australian Hardwoods Company (Limited)	,, ..	37,000 ,, ..	4 9½	,, ..	21 May, ,, ..	Nil	In hand.

APPENDIX D—*continued*.

SCHEDULE of SLEEPER CONTRACTS CURRENT on 1st April, 1912, and CONTRACTS ENTERED INTO by the Public Works Department, &c.—*continued*.

Date of Contract or Agreement.	Contractor's Name.	Address.	Number of Sleepers contracted for, and Class of Timber.	Rate per Sleeper.	Place of Delivery.	Date for Completion.	Total delivered to Date.	Date of Completion.
			TAURANGA DISTRICT.					
				s. d.				
21 Oct., 1910 ..	Fraser and Co.	Grafton, New South Wales	7,650 hardwood ..	4 4	Tauranga	21 April, 1911..	5,671	..
			510 " ..	4 6			371	
			440 " ..	4 8			212	
			200, 8′ x 6″ x 7″, iron-bark	5 3			3	
			GISBORNE DISTRICT.					
16 Aug., 1911 ..	Samuel Brown (Limited) ..	Wellington ..	230, 11′ x 8″ x 6″, iron-bark	30s. % sup. ft.	Gisborne	16 Feb., 1912..	212	..
			60, 7′ x 8″ x 5″, hard-wood	25s. % sup. ft.	"	" ..	59	..
			124, 8′ x 8″ x 5″, ditto	"	"	" ..	104	..
			80, 9′ x 8″ x 5″, "	"	"	" ..	80	2 Oct., 1912.
			100, 10′ x 8″ x 5″, "	"	"	" ..	92	..
			76, 11′ x 8″ x 5″, "	"	"	" ..	76	29 Mar., 1912.
2 " " ..	J. J. Wallace and Co. (Limited)	"	2,000, 7′ x 8″ x 5″, "	4 6	"	2 Nov., 1911 ..	1,450	..
5 Mar., 1912 ..	Millar's West Australian Hardwood Company (Limited)	" ..	21,000, 7′ x 8″ x 5″, jarrah	5 0	"	5 Sept., 1912..	21,000	3 Jan., 1913.
			80, 7′ x 8″ x 5″, " crossing	24s. % sup. ft.	.. .. ..	" ..	80	3 " "
			160, 8′ x 8″ x 5″, ditto	"	"	" ..	160	3 " "
			108, 9′ x 8″ x 5″, "	"	.. .. ..	" ..	108	3 " "
			132, 10′ x 8″ x 5″, "	"	"	" ..	132	3 " "
			100, 11′ x 8″ x 5″, "	"	"	" ..	85	3 " "
			NAPIER DISTRICT.					
17 April, 1912 ..	Millar's West Australian Hardwoods Company (Limited)	Wellington	24,492 7′ x 8″ x 5″, jarrah	4/6 and 5/–	Napier and Gisborne	17 Oct., 1912..	24,199	31 Dec., 1912.
17 " "	Ditto	"	580 crossing ..	24/–	Gisborne ..	17 " " ..	308	31 .. "
			STRATFORD DISTRICT.					
				s. d.				
18 April, 1912 ..	The New Zealand Powell-Wood Process (Limited)	Rangataua ..	24,500 powellized birch	4 0	Rangataua ..	12 Nov., 1912..	10,500	
18 " " ..	Ditto	"	580 crossing ..	19/6 per 100 sup. ft.	" ..	12 " " ..	460	
2 Feb., " ..	Silver-pine Timber Company ..	Horopito	1,820 silver-pine ..	7 0	Horopito ..	5 May, 1913..	166	
			WELLINGTON DISTRICT.					
				s. d.				
10 Sept., 1912 ..	Millar's West Australian Hardwoods Company (Limited)	Wellington	35,000 jarrah ..	4 9½	Wellington ..	21 May, 1913..	Nil	In hand.
10 " " ..	Ditto	"	2,502 crossing	23s. % sup. ft.	" ..	21 " " ..	..	"

APPENDIX D—*continued*.

SCHEDULE of Sleeper Contracts current on 1st April, 1912, and Contracts entered into by the Public Works Department, &c.—*continued*.

Date of Contract or Agreement.	Contractor's Name.	Address.	Number of Sleepers contracted for, and Class of Timber.	Rate per Sleeper.	Place of Delivery.	Date for Completion.	Total delivered to Date.	Date of Completion.
			SOUTH ISLAND.					
			WESTLAND DISTRICT.					
				s. d.				
16 April, 1912	F. Fox	Cronadun	813 silver-pine	3 3	Cronadun	16 April, 1912	813	16 April, 1912.
22 ,, ,,	J. A. Cooper	Hokitika	560 ,,	3 3	Hokitika	22 ,, ,,	560	22 ,, ,,
22 ,, ,,	Jack Bros.	Kotuku	629 ,,	3 3	Kotuku	22 ,, ,,	629	22 ,, ,,
9 May, ,,	T. Chinn	Ross	1,042 ,,	3 3	Ross	9 May, ,,	1,042	9 May, ,,
7 June, ,,	W. Ryan	Kokiri	533 ,,	3 3	Kokiri	7 June, ,,	533	7 June, ,,
9 July, ,,	J. Cooper	Hokitika	675 ,,	3 3	Hokitika	9 July, ,,	675	9 July, ,,
12 ,, ,,	P. Brunning	Cronadun	2,833 ,,	3 3	Cronadun	12 ,,	2,833	12 ,, ,,
24 ,, ,,	T. Chinn	Ross	602 ,,	3 3	Ross	24 ,, ,,	602	24 ,, ,,
6 Nov., ,,	F. Fox	Cronadun	1,183 ,,	3 6	Cronadun	6 Nov., ,,	1,183	6 Nov., ,,
28 ,, ,,	G. Feary	,,	3,083 ,,	3 6	,,	28 ,,	3,083	28 ,, ,,
Various	Various	Various	4,512 ,,	Various	Various	Various	4,512	Various.
			CHRISTCHURCH DISTRICT.					
				s. d.				
21 Aug. 1912	Millar's West Australian Hardwood Company (Limited)	Wellington	15,000 jarrah	4 9½	Lyttelton	21 May, 1913	15,204	18 Feb., 1913.
21 ,, ,,	Ditto	,,	170 crossing	23s. per 100 sup. ft.	,,	21 ,, ,,	170	18 ,, ,,
			DUNEDIN DISTRICT.					
				s. d.				
22 Aug., 1912	J. A. Redpath and Son	Christchurch	11,000 hardwood	4 6½	Dunedin	22 May, 1913	1,232	

APPENDIX E.

ANNUAL REPORT ON PUBLIC WORKS BY THE ENGINEER-IN-CHIEF.

(1st July, 1912, to 30th June, 1913.)

The Engineer-in-Chief to the Hon. the Minister of Public Works.

Public Works Office, Wellington, 30th June, 1913.

Sir,—

I have the honour to submit the following report on the various works completed and in progress throughout the Dominion during the past year:—

RAILWAYS.

Abstract.

The following table shows the expenditure and liabilities on Government railways in New Zealand up to the 31st March, 1913:—

Name of Railway.	Total Length of Railway or Section.		Open for Traffic.		Expenditure to 31st March, 1913.			Liabilities on 31st March, 1913.		
	M.	ch.	M.	ch.	£	s.	d.	£	s.	d.
Kaihu Valley	19	58	17	21	75,526	11	10	397	16	9
Kawakawa–Hokianga	34	12	..		116,396	1	8	..		
Opua Wharf – Grahamtown (Onerahi)	58	6	58	6	515,391	5	11	..		
North Auckland Main Trunk Railway (from Helensville)	121	0	45	42	631,200	17	4	6,401	1	3
Helensville – Te Awamutu, with Branches	151	1	151	1	1,675,827	19	8	3,646	17	1
Huntly-Awaroa	9	0	..		..			..		
Hamilton–Thames, with Branches	75	18	75	18	505,697	12	8	3	0	0
Thames Valley – Rotorua	69	33	69	33	359,544	0	11	..		
Tauranga–Paengaroa, with Branch (part of)	18	65	..		94,612	18	4	3	0	0
Gisborne–Motu	52	34	31	69	510,985	2	9	286	6	4
Napier–Gisborne	120	0	..		28,977	10	6	135	13	9
Wellington – Napier and Palmerston North (including Te Aro Extension and Greytown Branch)	233	12	233	12	2,483,715	6	0	..		
Wellington–Waitara, with Branches	289	27	285	59	2,564,512	9	6	..		
Stratford – Okahukara	94	70	31	40	522,354	4	4	1,770	18	1
North Island Main Trunk (Marton – Te Awamutu) including Raetihi Branch	217	69	209	69	2,705,750	4	8	..		
Picton–Waipara (South Island Main Trunk Railway)—										
Picton southwards	92	34	48	9	585,869	6	3	3,932	5	2
Waipara northwards	90	45	44	14	370,478	7	0	1,075	19	0
Nelson–Belgrove	22	73	22	73	197,922	17	1	..		
Midland Railway*	239	71	151	66	1,611,204	12	6	8,650	9	5
Westport–Ngakawau	19	56	19	56	188,008	17	3	..		
Westport–Ngakawau Extension to Mokihinui† ..	7	12	7	12	..			..		
Mokihinui Colliery Line‡	3	69	3	69	..			..		
Westport–Inangahua	26	0	5	74	116,760	2	2	28,857	8	7
Ngahere–Blackball	3	40	3	40	147,536	10	5	..		
Greymouth – Coal Creek	8	70	5	1	235,933	15	2	1,958	4	6
Greymouth–Brunner	7	51	7	51	150,512	11	11	..		
Greymouth–Mikonui	41	0	38	68	336,873	5	2	..		
Culverden–Hanmer Motor-cars and Repairs to Road ..	..		..		3,834	0	0	..		
Hurunui–Waitaki, with Branches	483	72	443	8	2,496,796	17	1	..		
Canterbury Interior Main Line—Oxford–Temuka ..	83	0	11	44	59,343	9	2	..		
Waitaki–Bluff, with Branches	616	68	523	1	4,759,177	11	10	3,542	15	3
Otago Central	182	56	134	76	1,280,391	18	9	..		
Invercargill–Kingston, with Mararoa Branch	117	4	97	44	365,332	7	3	..		
Forest Hill Railway—Winton–Hedgehope§	12	40	12	40	22,983	14	5	..		
Western Railways	71	6	70	31	329,429	17	2	..		
Preliminary Surveys	..		..		38,437	17	10	3	8	3
Miscellaneous	..		..		10,336	19	11	..		
Stock of Permanent-way on hand	..		..		100,679	18	11	51,233	19	7
Rolling-stock	..		..		5,421,055	5	2	143,441	0	0
Total	3,693	32	2,860	27	‖31,619,392	8	6	255,340	3	0
Provincial Government Lines, etc.										
Canterbury (lengths included above)	..		..		731,759	0	0	..		
Otago and Southland	..		..		372,522	2	5	..		
Gisborne to Ormond Tramway	..		..		4,975	1	7	..		
Midland Railway, valuation of works constructed by company	..		..		¶683,460	3	1	..		
Grand total	3,693	32	2,860	27	33,412,108	15	7	255,340	3	0

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* The amount shown as expenditure represents the net amount charged against the Dominion.

† The funds for this extension—namely, £35,501 2s. 11d.—were provided by the Westport Harbour Board.

‡ The funds for purchase of this line, £15,745, were provided by the Westport Harbour Board.

§ The expenditure on this line as a tramway was made by the Lands Department.

‖ Includes expenditure on railways under Hutt Road and Railway Improvement, Railway Improvement Authorization Act, and Wellington-Manawatu Railway Purchase Act Accounts.

¶ Includes value for £150,000 paid to debenture-holders under the Midland Railway Petitions Settlement Act Amendment Act, 1903.

During the financial year a total length of 52 miles 51 chains ot railway, as shown in the following table, was opened for general traffic :—

Plan Mileage.	Railway.	Section.	Length.	Date of handing over.
M. ch. M. ch.			M. ch.	1912.
0 0 to 5 74	Westport–Inangahua ..	Te Kuha	5 74	1 April.
23 74 to 31 69	Gisborne–Motu	Waikohu–Otoko ..	7 75	6 April.
22 65 to 31 40	Stratford Main Trunk (west end)	Pohokura	8 55	1 August.
35 50 to 44 13	South Island Main Trunk	Parnassus	8 43	1 September.
46 38 to 59 17	Midland	Manu and Glenhope ..	12 59	2 September.
				1913.
72 45 to 81 30	North Auckland ..	Kaiwaka	8 65	18 March.
			52 51	

KAIHU VALLEY RAILWAY (16 m. 67 ch. to 19 m. 24 ch.—2 miles 37 chains in length)..

Rails have been laid and ballasting is practically completed to 18 m. 40 ch. A bridge at this point is almost finished, as are also bridges at 18 m. 45 ch. and 18 m. 65 ch.

A siding 30 chains in length was constructed into ballast-pit at Maropiu.

The formation of Waima Station yard is finished.

All works on this line should be completed within six months.

KAWAKAWA–HOKIANGA RAILWAY.

Ngapipito Section (0 m. to 7 m.).—All bridges on this section have been completed. The ballasting is completed up to 6 m., leaving only 1 mile to finish.

The railway reserve has been fenced on both sides.

Kaikohe Section (7 m. 0 ch. to 16 m. 25 ch.).—The formation-work is nearing completion. The formation of Otuhi and Rakatau station-yards is in hand. Approach roads have been made to Rakatau and Kaikohe station-yards.

All culverts, fencing, bridges, and platelaying on main line have been completed during the year. There are, however, still 2 miles of sidings to put in. All ballasting has been finished except about 1½ miles of top lift on main line and the ballasting of station-yards; station buildings are being erected by day labour and petty contracts at Kaikohe, Ngapipito, and Otuhi station-yards. The permanent telephone-line is in course of construction.

NORTH AUCKLAND RAILWAY.

Kaiwaka Section (72 m. 45 ch. to 81 m. 30 ch.).—A turntable was erected at Kaiwaka Station yard. Slips, especially between 77 m. 65 ch. and 80 m. 78 ch., were very troublesome. This section was finally completed and handed over to Railway Department on the 18th March, 1913.

Otamatea Section (81 m. 30 ch. to 83 m. 75 ch.).—The Kaitara bank and 10 ft. culvert have now been completed. The pug cuttings between 82 m. 10 ch. and 34 ch. slipped badly, but have since been cleared out. The rails have been laid to 83 m. 73·50 ch., and the ballasting, except on the Kaitara bank, complete to 83 m. 68 ch.

The Otamatea Wharf was completed at the end of May, and the approach-filling is now in hand.

The contract for the erection of the Otamatea Bridge is considerably behind time; three 41 ft. and four 100 ft. spans have been completed.

Bickerstaffe Section (83 m. 75 ch. to 88 m. 20 ch.).—The Bickerstaffe tunnel, 8½ chains long, has been completed.

The bridge over Muddy Creek at 86 m. 70 ch. is almost completed.

The driving of Maungaturoto Tunnel is proceeding slowly on account of the heavy nature of the country, about 7 chains of tunnel having been completed.

The earthworks (with one or two exceptions) on this section are complete.

Huarau Section (88 m. 20 ch. onwards).—Formation and culverts are in hand up to 88 m. 48 ch., but work has been delayed pending the location of the line further ahead.

HUNTLY–AWAROA RAILWAY.

Huntly–Awaroa Section (7 miles 24 chains in length).—Earthworks have been completed up to 1 m. 40 ch., and are in hand up to 3 m.

The combined road and railway bridge over the Waikato River at Huntly is nearing completion, there remaining unfinished the last 100 ft. span and a small extension rendered necessary by road-alterations in Huntly Township.

EAST COAST MAIN TRUNK RAILWAY.

Waihi–Tauranga.

Waihi Southwards Section.—The bulk of the earthworks and many of the culverts on the first 4 miles are completed.

Tauranga–Opotiki.

Maunganui – Te Puke Section (13 miles in length).—The subsidence of embankments mentioned in last year's report still continues. Most of the banks are holding up fairly well with the exception of the long swamp, 50 m. 33 ch. to 52 m. 28 ch.

Permanent bridges have been erected at 53 m. 44 ch., 52 m. 28 ch., and 51 m. 20 ch.

Rails have been laid to Te Puke, 53 m. 77 ch. Quarrying and crushing have been steadily continued throughout the year, and ballasting operations pushed on. Ballasting is completely finished for 2 miles 50 chains, and a first lift is on throughout the section, except on the long swamp previously referred to.

A tender has been accepted for the erection of station buildings at Otaamatua, Papamoa, and Te Puke, and a well-equipped workshop has been erected at Mount Maunganui Station-yard.

Te Puke – Paengaroa Section (length, 5 miles 65 chains).—Fair progress has been made on this section, and the most of the earthworks, except the big Kaituna bank, are finished ready for platelaying.

There have been 2 miles 13 chains of fencing erected.

Opotiki–Gisborne.

Rakauroa Section (31 m. 45 ch. to 38 m. 25 ch.).—Platelaying and fencing are complete. Two lifts of ballast have been put on throughout except on sidings.

A steel-girder bridge on concrete piers over the Waikohu River at 37 m. 52 ch. has been erected during the year. Land-slides gave considerable trouble between 31 m. 35 ch. and 32 m.

A new ballast-pit has been opened at Puha, and ballast obtained from it for Rakauroa and Matawai Sections.

Matawai Section (38 m. 25 ch. to 44 m. 10 ch.).—The earthworks on this section are finished. Several of the cuttings slipped badly, especially at 40 m. 25 ch., where the ground has slipped for several chains back from line.

The tunnel at 42 m. 42 ch. has been lined with concrete, and the portals at both ends finished.

All platelaying and fencing are finished, and two lifts of ballast have been placed on main line, and one lift in Matawai Station yard. At the latter yard four cottages have been erected.

Motu Section (44 m. 10 ch. onwards).—The formation of this section is in hand up to 48 m., most of the cuttings being through.

A 10 ft. circular culvert has been built at 46 m. 25 ch., and all other culverts are in place up to 47 m. 40 ch. This section is partly fenced up to 46 m.

Gisborne–Napier.

Ngatapa Section (0 m. to 10 m. 29 ch.).—The earthworks are almost finished and all the smaller culverts are complete. The formation of the Ngatapa Station yard is in progress. The fencing of railway reserve is about complete.

A survey has been made of a line and siding from main line to Patutahi Quarry.

Waikura Section (10 m. 29 ch. onwards).—Three formation contracts, covering 50 chains of line, have been let and are now in progress.

Eskdale Section (0 m. onwards).—During the year formation-work has been done from 6 m. 35 ch. to 7 m. 35 ch., and from 7 m. 50 ch. to 8 m. 68 ch., and a culvert built at 7 m. 59 ch. Some necessary fencing has been done between 7 m. and 8 m. 40 ch.

A test pile has been driven near 1 m. 17½ ch., in the vicinity of the proposed railway and road bridge.

A contract is being prepared for the construction of the first 2 miles of railway.

STRATFORD – MAIN TRUNK RAILWAY.

Western End.

Pohokura Section (22 m. 65 ch. to 31 m. 40 ch.).—This section, 8 miles 55 chains in length, was handed over to the Railway Department on the 1st August, 1912.

Whangamomona Section (31 m. 40 ch. to 37 m. 53 ch.).—The formation-work is complete except for the lining of some water-drives and the construction of private crossings. Considerable extra work was occasioned by slips on the heavy sidelings between 34 m. 40 ch. and 35 m., the slip at 35 m. being particularly bad. Seven steel-girder bridges between 35 m. 70 ch. and 37 m. 25 ch. have been erected during the year.

Platelaying on main line has been completed to Whangamomona Station yard, and the ballasting to 37 m. 22 ch.

A contract for the station buildings at Whangamomona is in progress, and should be completed in January. This section should then be ready for handing over to the Railway Department.

Tahora Section (37 m. 53 ch. onwards).—The earthworks up to 42 m. are nearly finished, and are in hand up to 44 m. 76 ch. Deviations are being made to avoid slips at 38 m. 10 ch. and 38 m. 50 ch.

The bottom heading of tunnel at 44 m. 40 ch. has been driven and the enlargement commenced. Washed shingle and concrete blocks are being brought from Skinner Road ballast-pit. The tramway has been completed up to 44 m. 12 ch. near the tunnel. Wherever possible the tram has been laid on the railway formation with permanent-way materials. Passengers, goods, and construction material are carried on this tram.

Bridges at 37 m. 61 ch. and 39 m. 43 ch. are in hand.

One cottage is being erected at Kohuratahi Station and another is being removed there from Skinner Road ballast-pit.

Eastern End.

The service road from Okahukara to Ohura Valley was completely formed and metalled, and is now open for traffic. A branch service road has also been constructed up towards the tunnel at the Okahukara end. Formation and culverts are in hand under the co-operative system from 0 m. to 1 m. 40 ch.

A contract has been let for the construction of line from 1 m. 40 ch. to 4 m., including a tunnel 74 chains long through the divide.

Small contracts are being prepared for formation-work between 4 m. and 6 m.; on these 2 miles the Department is constructing the culverts.

Three cottages have been built at Okahukara by this Department, and sidings and station buildings in yard by Railway Department.

MOUNT EGMONT RAILWAY.

(5 m. 64 ch. onwards).

The Little River diversion is now complete, and three bridges have been erected over it. The earthworks are complete to 8 m. 3 ch., and the clearing to 8 m. 60 ch. Rails have been laid from 5 m. 64 ch. to 6 m. 17 ch., including 22 chains at the "Foot Station."

Trial lines were run on both the Manganui and Mangamawhete sides of the quarry-face, and it was finally decided to adopt the Mangamawhete face. A scheme is now being prepared for working the quarry, and trial shafts and drives are being put in to determine top and bottom of rock. The quarry-site is now being cleared

NORTH ISLAND MAIN TRUNK RAILWAY.

Raetihi Branch (0 m. onwards).—The arrangements at Ohakune Junction were altered, necessitating a re-location of the line between Junction and Ohakune Township, a distance of about 2 miles.

The centre-line has been cleared for about 2¾ miles, formation-work is in hand on the first 29 chains, and culverts are being constructed up to 1 m. It is intended to let the rest of the formation-work in small contracts.

SOUTH ISLAND MAIN TRUNK RAILWAY.

North End.

Mirza Section (48 m. 10 ch to 51 m 45 ch.).—Very little earthwork has been done this year. The centre-line has been restaked out and levelled, and plans and specifications are being prepared so as to let a contract for the completion of section, including earthworks, platelaying, and ballasting. Most of the rails and sleepers are on hand at Ward Station yard.

Mills Section (51 m. 45 ch. to 56 m. 6 ch.).—Formation-work on this section is well advanced; an approach road has been formed from main road to the south end of Ure Bridge. The Tarbarrel Tunnel at 53 m. 2 ch. has been completely excavated and lined. All sand batters of formation to the south of the Ure Bridge have been planted with marram-grass, which has proved very successful.

It has been found necessary to cover the sand formation with a 6 in. layer of ballast to prevent it being blown away.

A contract has been let for the construction of the Ure Bridge, of sixteen 25 ft. spans. Half the piers have been driven, and all timber is now on the ground.

It is intended to call for tenders for the completion of this section, and plans and specifications are now being prepared.

Kekerangu Section (56 m. 6 ch. onwards).—Nothing has been done on this section beyond the survey and the planting of marram-grass. A deviation from the original surveyed line has been pegged between 56 m. 6 ch. and 60 m., which will effect a saving of £1,600.

Near 61 m. on trial line a large slip has occurred, and it is now being surveyed and borings taken to ascertain the nature of the slip.

South End.

Parnassus Section (35 m. 50 ch. to 44 m. 13 ch.).—This section was completed (except for stone groynes in Waiau River) and handed over for traffic to Railway Department on the 1st September, 1912.

Mendip Section (44 m. 13 ch. to 51 m.).—The earthwork is almost completed to 47 m., and some work has been done between 47 m. and 48 m. The culverts are completed to 46 m. Two piers of Leader Bridge were constructed, and the girders are on site. Rails have been laid to 44 m. 58 ch.

MIDLAND RAILWAY.

Nelson–Westland Section, North End.

Manu Section (46 m. 38 ch. to 49 m. 55 ch.).—This section was handed over to the Railway Department on the 2nd September, 1912.

Glenhope Section (49 m. 55 ch. to 59 m. 17 ch.).—This section was also finally completed and handed over to the Railway Department on the 2nd September, 1912.

Kawatiri Section (59 m. 17 ch. to 63 m. 10 ch.).—The line has been cleared up to 62 m. 41ch., and the earthwork completed to 59 m. 73 ch., and partially done up to 61 m. 27 ch. Most of the culverts up to 61 m. have been constructed.

Nelson–Westland Section, South End.

Cronadun–Landing Section (45 m. 40 ch. to 54 m.).—This section is complete, but is still being held and maintained by this Department.

Landing – Inangahua Junction Section (54 m. to 58 m. 40 ch.).—All earthworks are completed, and rails have been laid up to 58 m. 40 ch. The ballasting is now in hand. The bridge over Hard Creek has been constructed. A temporary station has been formed at 58 m. 30 ch., but no station buildings have as yet been constructed.

Canterbury–Westland Section, West End.

Otira Section (50 m. 38 ch. to 51 m. 40 ch.).—The protective work has been continued in the Otira and Rolleston river-beds.

Arthur's Pass Tunnel Contract (51 m. 40 ch. to 59 m. 40 ch.).—This work was taken over by the Government from Messrs. John McLean and Sons (Limited) on the 28th December, 1912, and has been carried on by the Department, principally on day-wages, except outside work, such as block-making, formation, river-protective works, &c., which have been worked on the co-operative-contract principle. At the Otira end the tunnel is lined completely to 54 m. 49 ch., a distance of 1 mile 62 chains, and the bottom heading driven to 54 m. 75 ch., a distance of 2 miles 8 chains. At the Bealey end the lining is completed to 57 m. 62 ch., a distance of 30 chains, and the bottom heading driven to 57 m. 53 ch., a distance of 39 chains. There remain, therefore, 2 miles 58 chains of bottom heading still to drive, and 3 miles 13 chains between the completed portions.

The piers of bridges at Rough Creek, 58 m. 65 ch., and flood-opening, 59 m. 18 ch., have been built. A temporary terminal station is being constructed at Bealey Flat, 58 m. 50 ch. Seven cottages are being erected on the terrace opposite 58 m. 30 ch.

The protection-work is nearly complete from 59 m. 40 ch. to Bealey Flat, but above this point to the tunnel there is still a considerable extent to do.

Bealey Section (27 m. 40 ch. to 41 m. 46 ch.).—The formation of the section is almost complete, and the rails have been laid up to 40 m. 26 ch. Ballasting is in hand up to 38 m. 52 ch.: this has been delayed by the raising of formation between 34 m. 30 ch. and 36 m., rendered necessary by floods. Ballasting will now be continued to Bealey Flat. The lower Bealey Bridge at 38 m. 68 ch. is almost finished.

Severe floods in March damaged a good deal of protection-work, but this has now been repaired, and is now approaching completion.

WESTPORT–INANGAHUA RAILWAY.

Cascade Section (5 m. 74 ch. to 12 m.).—Practically the whole of the earthwork on this section is now being done by contract, a total of eighteen contracts have been let up to 10 m. to date, and of these, six have been completed and one abandoned. Further contracts have been prepared for formation between 10 m. and 12 m., and the resurvey of 12 m. to 13 m. is in hand. Contract No. 1 (6 m. 35 ch. to 6 m. 70 ch.) should be complete within the next three months. Extensive slips have occurred on this contract. Contract No. 2 (6 m. 70 ch. to 7 m. 20 ch.) is practically complete. Contract No. 7 (7 m. 46 ch. to 8 m.) is in progress; includes earthwork and concrete-bridge abutments. Contract No. 8 (8 m. to 8 m. 38·50 ch.): Fair progress is now being made, and it should be finished within six months. Contract No. 9 (8 m. 42·40 ch. to 8 m. 50·50 ch.): Owing to difficulty in getting men, contract has been considerably delayed. Contract No. 10 (8 m. 50·50 ch. to 8 m. 68 ch.). This contract is now over time, and there remains yet the tunnel between 8 m. 56 ch. and 8 m. 64 ch. to complete. Contract No. 11 (7 m. 38·50 ch. to 7 m. 46·60 ch.) and contract No. 13 (9 m. 50 ch. to 9 m. 28 ch.): Fair progress has been made on both these contracts. Contract No. 14 (9 m. 28 ch. to 9 m. 39 ch.), contract No. 15 (9 m. 39 ch. to 9 m. 53 ch.), contract No. 16 (9 m. 53 ch. to 9 m. 59·50 ch.), and contract No. 17 (9 m. 59·5 ch. to 10 m. 0 ch.) are all in hand. A bushfelling and clearing contract (10 m. to 12 m.) is in hand, but is considerably over time owing to contractor being unable to get bushmen.

GREYMOUTH – POINT ELIZABETH COLLIERIES RAILWAY EXTENSION.

Coal Creek Section (3 miles 69 chains in length).—This line is practically complete. The centre rail has been laid on the incline from Dunollie to Mount Davey Station, and the line is fully ballasted.

All sidings in the coal-bins yard have been laid and ballasted except for an area round the bins where Mines Department's material is stacked. Several slips have occurred, and a concrete wall has been built to hold a slip near the bins.

A contract was let for the erection of station buildings at Mount Davey Station, but, owing to wet weather and green state of timber, poor progress has been made. The weighbridge has been erected and housed in.

Mining machinery and other material have been carried up and coal carried down the line whenever required.

CATLIN'S–WAIMAHAKA RAILWAY.

Catlin's End.

Puketiro Section (24 m. 8 ch. to 31 m. 30 ch.).—From 24 m. 8 ch. to 25 m. 60 ch. has been completed for some time, but is still retained by the Department for convenience in ballasting, the quarry and stone-crushing plant being situated at 24 m. 20 ch.

The bank at 26 m. 37 ch. slipped and had to be refilled; the culvert under this bank was lengthened by 58 ft. Slips were also removed at 31 m. 20 ch. This section is now almost complete.

Papatowai Section (31 m. 30 ch. to 36 m. 60 ch.).—All clearing of main line was finished, and further clearing is in hand for additions to Papatowai Station yard. The service tramway has been extended to the bank of the Maclennan River opposite 36 m. 10 ch.

Earthworks are complete except several banks that have slipped, and the widening of Papatowai Station yard. 18 chains of approach roads at Caberfeidh Station and 6 chains at Papatowai have been formed. The line has been trimmed and rails laid to 35 m. 61 ch., and a first lift of ballast is on to 35 m. 54 ch., and a second lift to 33 m. 60 ch.

In Caberfeidh Station-yard the sidings have been laid and partially ballasted. A contract was let for the erection of the Maclennan River Bridge, and the contractor has now his temporary staging erected.

A contract has also been let for the erection of station buildings at Caberfeidh and Papatowai.

Tahakopa Section (36 m. 60 ch. to 42 m.).—Clearing on this section is complete from 36 m. 60 ch. to 39 m. 71 ch., and from 40 m. 11 ch. to 41 m. 13 ch. The formation-work is so far completed that the rails could be laid as far as 37 m. 21 ch. Formation and ditching is in hand to 41 m. 5 ch. There were 15 chains of road-deviation formed.

LAWRENCE–ROXBURGH RAILWAY.

Beaumont Section (29 m. 33 ch. to 34 m. 65 ch.).—The excavation and lining of Big Hill Tunnel, 29 m. 36 ch. to 29 m. 57·50 ch., were completed in December last; the bottom has been trimmed and stone drains placed along both footings.

The formation of line is complete to 32 m. with the exception of a bank at 30 m. 66 ch. and a bank and cutting between 31 m. 35 ch. and 31 m. 45 ch. Earthworks are now in hand to 34 m. 2 ch. Considerable delay in completing the big bank and cutting at 30 m. 62 ch. was caused by the bank slipping, necessitating extensive stone and tile draining. Culverts and stream diversion are complete to 32 m., and fencing to 31 m. 70 ch. At 30 m. a road-deviation and overhead bridge have been constructed; also road-deviations from 31 m. 60 ch. to 70 ch., and from 32 m. 63 ch. to 33 m. 6 ch. Fencing has been completed on both sides from Big Hill Station to 31 m. 70 ch. The heavy work is now in a completed state, only the light work remaining.

SURVEYS OF RAILWAYS UNDER CONSTRUCTION, NEW LINES OF RAILWAYS, LAND PLANS, ETC.

KAWAKAWA–HOKIANGA RAILWAY.

The permanent line has been pegged as far as 20 m., and exploration surveys are about to be undertaken beyond Hokianga. The land-plan survey is in hand beyond Kaikohe Station, at 16 m. 25 ch.

WHANGAREI SOUTHWARDS RAILWAY.

A trial survey, 25 miles 27 chains long, from Whangarei, via Mangapai and the Tauraroa River, to connect with the North Auckland Trunk line, was completed. Further trials are now being run along alternative routes.

NORTH AUCKLAND RAILWAY.

A deviation has been made between 88 m. 70 ch. and 90 m. 42 ch. Surveys were also made for a deviation in the Paparoa Valley. Trial lines have been run and plans prepared up to 98 m. Trial surveys have been made or are in hand from 98 m. up to the Wairoa River crossing near Kirikopuni (about 121 m.). A contract has been completed for a land-plan survey from 86 m. 9 ch. to 88 m. 48 ch.

HUNTLY–AWAROA BRANCH RAILWAY.

The permanent survey of the line is finished up to 5 m. 35 ch., and beyond this point the trial surveys of two alternative routes have been made. It has now been decided to proceed with the permanent pegging up to 7¼ m. along the adopted route. The land-plan survey up to 3 m. is complete except the first 10 chains.

WAIUKU BRANCH RAILWAY.

Trial surveys are in hand, and 6½ miles of the old survey have been revised.

MAIN TRUNK – CAMBRIDGE – ROTORUA RAILWAY.

An examination and report were made of the following three routes: Cambridge to Tirau; Cambridge to Putaruru; Putaruru to Kawa.

KAWHIA – MAIN TRUNK RAILWAY.

Exploration surveys to connect Kawhia with the Main Trunk railway have been carried out, the following routes being reported on: Kawhia to Frankton Junction; Kawhia to Kiokio; Kawhia to Hangatiki; and Kawhia to Kawa.

EAST COAST MAIN TRUNK RAILWAY.

Te Puke – Paengaroa Section.—A land-plan survey has been made, and plans are now being checked.

Paengaroa–Pongakawa–Otamarakau–Matata Section.—The trial line was completed to 94 m. 50 ch., and the permanent line pegged to 92 m. 72 ch.

Okere–Paengaroa.—A trial survey was completed in August, 1912.

Waihi Southwards to Tauranga.—The permanent survey was completed to 11 m. 18 ch. The land-plan survey of the first 4 miles has been completed.

Te Puke Quarry.—Several trial surveys were made, and permanent survey has now been made.

Gisborne–Motu.—The permanent location survey has been carried to 52 m.

Gisborne–Napier.—At the Gisborne end, surveys are in hand from Ngatapa, 11 m., to about 34 m. At the Napier end the permanent line has been pegged to 10 m., and the trial survey made up to 20 m. 7 ch. The plans of this are in hand. A land-plan survey has been made from 1 m. 60 ch. to 8 m., and plans are now under examination.

HASTINGS–PUKETITIRI TRAMWAY.

A reconnaissance survey for a light railway between Hastings and Puketitiri, a distance of about 41 miles, has been made.

STRATFORD – MAIN TRUNK RAILWAY.

West End.—A trial survey was run on original route through Tangarakau Gorge, and several deviations were also made. A rough trial was then run from Tahora Station down the Raekohua Valley, across the Tangarakau River, and through the Maraekowhai Native block into the Heao Valley: this route has been adopted, and is now being surveyed.

East End.—The permanent survey is complete to 16 m. 60 ch., and plans are now being completed.

NORTH ISLAND MAIN TRUNK RAILWAY.

Raetihi Branch.—The permanent survey has been completed up to 6 m., and is in hand to Raetihi Township. Plans of the first 4 miles are complete.

MOUNT EGMONT BRANCH RAILWAY.

The permanent line has been pegged up to the face at the Mangamawhete quarry-site.

OPUNAKE BRANCH RAILWAY.

Several trial surveys were made from near Te Roti Station.

MIDLAND RAILWAY.

Nelson End.—The permanent line has been pegged to 63 m. 10 ch. and plans prepared. Two trial surveys have been made between 63 m. 10 ch. and 65 m. 46 ch., and a trial continued from there to 69 m.

SOUTH ISLAND MAIN TRUNK RAILWAY.

Canterbury–Marlborough (South End).—A trial line was run from 56 m. 6 ch. to 60 m., and permanent line has now been pegged to this point. A trial survey is also completed from 60 m. to 62½ m. Trial surveys of three routes have been made for about 12 miles beyond Mendip Hills to the Charwell Flats.

CULVERDEN–WAIAU.

Trial surveys of two routes are being made.

CATLIN'S–WAIMAHAKA RAILWAY.

The permanent line was pegged from 38 m. 58 ch. to 41 m. 64 ch. A land-plan survey from 29 m. to 36 m. 57 ch. was carried out under contract.

LAWRENCE–ROXBURGH RAILWAY.

The permanent line was pegged to 34 m. 68 ch. A land-plan survey was completed from 29 m. 20 ch. to 32 m.

BALCLUTHA – TUAPEKA MOUTH RAILWAY.

A trial survey is now being made up the left bank of the Clutha River from a point on the main line from Dunedin to Invercargill about 55 chains north of the Clutha Bridge.

OREPUKI–WAIAU RAILWAY.

A trial line survey was made from Waikouro to Orawia.

ROADS AND BRIDGES.

Under all votes and accounts, except roads on goldfields, the total expenditure on roads during the last financial year amounted to £434,739. The amount expended during the quarter ended 30th June, 1913, was £102,706.

The *Te Kuiti–Awakino Road*, which is the main road from Te Kuiti to New Plymouth, has now practically been metalled from Te Kuiti to Piopio. Estimates have been made for metalling the remainder of the road; also the road from Piopio to Aria.

The *Ohura Road*, connecting the Main Trunk district with Taranaki, is now almost complete, with the exception of a bridge in the Tangarakau Gorge. At the Main Trunk end a deviation was formed and metalled close to the Stratford – Main Trunk Railway, from Okahukara to the Ohura Valley, thus saving 5 miles into the Ohura.

Gisborne–Opotiki Road.—Considerable survey and construction work has been done on the main road through from Motu to Opotiki.

Wanganui Town Bridge (Dublin Street).—In seven piers, ferro-concrete cylinders were substituted for piles: these have now all been sunk, and the completion of piers is in hand. Two spans of steelwork are erected, and sufficient for four more spans has been prepared.

Wairau River Traffic-bridge (near Renwicktown).—A traffic-bridge of eighty-nine 25 ft. spans on pile piers, and 69 chains of approaches, has been completed by the local body.

Wairau Flood-damage.—Extensive protective works have been carried out near the mouth of the Waihopai River by the local body.

Opawa River Bridge (near Blenheim).—Plans have been prepared for a reinforced-concrete structure 560 ft. in length.

Kahautara River Bridge.—A contract was let for the erection of this bridge of twenty spans of 25 ft., and is now nearing completion. 29 chains of approaches at the north end and 5 chains at the south end are in hand.

Lower Shotover Bridge.—This bridge which was being erected under contract for the Lake County Council was badly damaged by a flood when nearing completion, one pier and a 160 ft. truss having fallen into the river. The Department undertook to complete the bridge, and now have the work in hand.

Clutha River Bridge (at Luggate).—In connection with this work, which is being carried on by the Vincent County Council, the Department is assisting by testing cement and supervising the manufacture of ironwork at Dunedin.

Waikato River Bridge at Tokaanu.—The restoration of this bridge was completed in October last.

Waitara River Bridge (Waitara).—The erection of a bridge of four 60 ft. steel-girder spans on concrete piers and reinforced-concrete piles was carried out by the Waitara Borough Council.

Tokatoka Swamp Tram-line.—On the application of the White-pine Timber Company the Department has extended the tram another 22 chains. There still remains another half-mile to complete to south-west corner of Section 3.

Waipa River Bridge (Pirongia).—This bridge, consisting of steel girders on reinforced-concrete piers, is being constructed under the supervision of the Waipa County Council.

Waiau River Protection-works.—The Coromandel County Council have constructed some groynes and widened the stream.

Waipa River Bridge (Kawa Road).—Plans for this bridge were prepared by the Department, and the local body has called for tenders for the erection.

Taramakau Bridge Restoration.—Several spans of this bridge were washed away during a flood, and re-erection is now in hand.

Big Wanganui Bridge.—In South Westland, on the Ross to Waiho Road, the Big Wanganui Bridge, with approaches, is now complete. This road would be safe for motor-car traffic if the Mikonui, Little Wanganui, and Waitaha Rivers were bridged.

Working drawings of the following bridges have been prepared in the Head Office during the past year: Motueka River Bridge; Mangamahaki River Bridge; Kawarau Falls Bridge; Tangarakau River Bridge; Cobden Bridge; Te Karae Stream Bridge; Mangapeehi Stream Bridge; Wairoa (Tauranga) Road Bridge; Kaupokonui Road Bridge; Otakeho Road Bridge; Mangawhero Road Bridge; Ngaruawahia Road Bridge; Rangiriri Bridge; Balclutha Road Bridge; Mangawhero River Bridge (Burrell's Road); Okere Falls Bridge; Waipawa River Road Bridge; Mangawhero River Bridge (Anderson's Road); Buller River Bridge; Saltwater Creek Road Bridge; Hope Valley Bridges; Seven-mile Creek Bridge; Taramakau Road Bridge; Makakaho Stream Bridge; Rotokautuku Road Bridge; Opawa River Road Bridge.

FLOODS.

Surveys and reports have been made in connection with flood-damage and river-encroachment at Waipounamu, Oreti Valley, Balclutha, Inch-Clutha, Kaitangata, Stirling, Barnego, Otanomomo Settlement, Gore, and Waitaki River.

IRRIGATION.

Otekaike Settlement.—A contract has been let for the construction of 6 miles of race on the eastern side of river, and material for the siphons and other structures is now being obtained.

Central Otago Irrigation: Ida Valley Scheme.—The access road from Ida Valley to the Manorburn dam-site has been improved; a new road was formed from the half-way peg to the right-hand bank of the dam-site, cutting off about 5 miles.

A large barracks, blacksmith's shop, oil-stores, magazine, crusher-and-mixer, and new ropeways have been fixed across the gorge, and tram-line laid to quarry. The excavation for dam had been practically completed when a fault developed necessitating further sinking. Heavy rains and floods during the past few months have stopped progress, but it is intended to start concreting in November.

During the last winter about 30 chains of the Bonanza race were widened, and, in the spring, water was turned on for irrigation in the Ida Valley. Widening of race is now again in hand.

The site of the Moa Creek diverting-weir was excavated, and stone, gravel, and sand are on the ground in readiness for starting concreting in the spring.

About 20 chains of No. 3 Black's race has been finished, mostly in rock, and work is in hand to 1 m. 40 ch.

The sites of the Poolburn diverting-weir and dams have been set out.

A considerable amount of survey-work has been done in connection with the Manuherikia-Alexander-Clyde scheme. The country on the Moutere or right side of the Manuherikia has been carefully surveyed and levelled, and alternative race-lines have been set out. Little has been done on the Galloway side, and here there are alternatives to the scheme of picking up the water in Chatto Creek and conveying it across the Manuherikia River by means of the railway-bridge.

SEACLIFF MENTAL HOSPITAL WATER-SUPPLY.

A concrete dam is in hand in Waitiripaka Creek. Most of the pipes from dam to reservoir, a distance of 7 miles, have been laid, and the reinforced-concrete reservoir is practically complete. Floods and unfavourable weather have considerably hampered the work.

OHINEMURI SILTING.

A considerable amount of work has been done in killing and removing willows on the Waihou River and Komata Stream. About 3 miles of the river have recently been snagged.

Surveys have been carried out in connection with proposed stop-banks along the Ohinemuri River at Paeroa, and the Waihou River. Soundings and surveys of the Ohinemuri are being made below the Waihi-Paeroa Extraction Company's works to obtain information regarding the silting of the river.

Surveys have also been made of lands injured or destroyed by silt and of lands which will be specially benefited by reason of the river-improvements. A contract was let for the Ngararahi and Koutou cuts, for straightening the Waihou and Ohinemuri Rivers and forming stop-banks. The Ngararahi cut has been excavated to within 12 chains of the finishing-point, and the Koutou cut is in hand at the upper end. A contract is also in progress for the construction of a stop-bank along the right bank of the Ohinemuri River between Russel Street, Paeroa, and the Paeroa Railway-station.

A contract has been let to Messrs. Stevenson and Cook, of Port Chalmers, for the construction of a mechanical cutter suction dredge for the Waihou River improvement scheme.

TRAMWAYS.

Auckland.—The Green Lane to Mountain Road extension, the Victoria Avenue extension, and the Dominion Road duplication have been completed and passed for traffic. The duplication of the new North Road line between Dominion Road and New Edendale Road is in course of construction. Pneumatic sanders have been provided on 156 cars. Thirty new cars have been inspected and passed, making a total of 156 cars. Heavier brake-rigging has been fitted on all the old style of truck, Nos. 1 to 92 and 99 to 100.

Gisborne.—A tramway under a mile long was constructed and passed for traffic. The cars are electrically driven by power obtained from Edison-Beach storage batteries, no overhead equipment being necessary.

Napier.—This tramway is 2 miles 65 chains long, with a 12-chain branch line to railway-station. The track-work is practically complete, and half the overhead equipment is erected. The car-shed, power-house, and plant are ready. Five cars have arrived and are being put together.

Wanganui.—New cars and trailers were inspected and passed for traffic, making a total of twelve cars and two trailers in commission. Route No. 2, Gonville–Castlecliff portion, 2 miles 76 chains long, was completed and passed for traffic. A duplication was made along Taupo Quay and Victoria Avenue.

Wellington.—The duplication of the Brooklyn route from Nairn Street to the top of the hill is in hand, and the Kilbirnie route-duplication has been completed. During the year four new cars were inspected and passed for traffic. Cross-seated cars are being altered to provide central-passage-way.

Christchurch.—The Fendalton line was extended to Clyde Road, the Dallington line completed into Dallington, and the Papanui line extended from Horner Street to Northcote Road. On the Cashmere Hills line the line was duplicated between Moorhouse Avenue and Strickland Street, and extended up Hackthorne Road to the junction with Dyer's Pass Road Ten new cars were inspected and passed.

Invercargill.—The balance of the authorized lines has been completed during the year.

Wairio–Birchwood Tramway.—The formation of this is still in progress, but is practically complete. No platelaying has as yet been done.

MARINE.

Hokianga.—Motukaraka Wharf was completed by the Hokianga County Council during the year. The timber breastwork for reclamation purposes at Kohukohu has been extended. A horse-landing has been completed, and a pontoon launch landing is in an incomplete state at Kohukohu.

Channel Island Light Beacon.—The pedestal for this beacon has been made and stored in readiness for shipment, and a 5 ft. track and landing-stage are being constructed at the island.

D'Urville Rocks Beacon.—The manufacture of this beacon is in hand.

Manukau Lighthouse.—About ¾ mile of track has been formed on the road leading from Huia to the North Head leading-light, Manukau Harbour.

Ponui Passage Lighthouse.—Repairs were carried out in building, and also to pile injured by a collision.

Leigh Wharf.—A wharf 42 ft. long and concrete sea-wall have been constructed by the local body.

Turanga Creek Wharf.—A small timber-wharf has been constructed at Whitford.

Mahurangi River (Deepening).—6 chains of the river below the County Wharf have been deepened 2 ft. under the supervision of the local body.

Matakana River (Dredging).—Considerable improvements have been effected by deepening the channel and easing sharp bends between Todd's Wharf and the County Wharf.

Wade River (Deepening).—This work has been satisfactorily completed: the rocky bars have all been excavated, the channel straightened, and a turning-basin made just below the Wade Wharf, where steamers can now turn with ease.

Chicken Island Light Beacon.—The manufacture of this beacon has been completed by Messrs. Luke and Co.

Castle Point Lighthouse.—The tower for this lighthouse was completed and taken to Castle Point during the early part of last year.

Somes Island.—Repairs to cottage and wharf are in hand.

Karamea Training-wall.—The extension of the wall has been satisfactorily carried out.

Little Wanganui Wharf.—The contract for additions and repairs to this wharf was completed satisfactorily on the 30th September, 1912.

Godley Head Lighthouse.—A track and steps have been constructed from the lighthouse to the fog-signal.

DEFENCES.

Various works in connection with defences have been carried out during the year at Auckland, Wellington, and Dunedin.

CONTRACTS.

A complete schedule of contracts entered into during the year for the construction of works, and also for the supplies of material and the performance of various services, is given in Appendix C.

I have, &c.,

R. W. Holmes, M.Inst.C.E.,
Engineer-in-Chief.

The Hon. the Minister of Public Works.

TABLE of Lengths of Government I

Appropriation.	Division.	Mileage.	Section.	Main Line.
1	2	3	4	5
		M. ch.		M. c
Nelson-Roundell Midland Railway	Nelson-Belgrove ..	22 73	Nelson-Belgrove ..	22 7
	Stillwater - Belgrove (*via* Tadmor)	147 7	Stillwater-Reefton S.	37
			Reefton S.-Reefton N.	1
			Reefton N.-Cronadun	5 3
			Cronadun-Landing ..	8 4
			Landing-Inangahua	6
			Inangahua-Kawatiri	46
			Glenhope-Kawatiri	4
			Glenhope-Tui ..	9 4
			Tui-Kiwi	3 1
			Kiwi-Tadmor ..	5
			Tadmor-Kohatu ..	10
			Kohatu-Belgrove ..	9 4
	Brunner - Springfield	92 64	Brunner-Otira ..	42
			Rolleston Section ..	1
			Tunnel Contract ..	8
			Tunnel Contract-Cass	13 7
			Cass - Broken River ..	15 2
			Broken River - Otarama	7 4
			Otarama-Springfield	4 5
Blackball Railway	Ngahere-Blackball	3 40	Ngahere-Blackball ..	3 4
Greymouth-Nelson Creek	Greymouth - Nelson Creek	7 51	Greymouth-Brunnerton-Stillwater	7 5
Westport-Ngakawau	Westport - Ngakawau	19 56	Westport-Ngakawau	19 5
Westport-Ngakawau Extension	Ngakawau - Mokihinui	7 12	Ngakawau-Mokihinui	7 1
	Mokihinui Colliery Line	3 69	Mokihinui-Seddonville	3 6
Westport-Inangahua	Westport Inangahua Junction	26 0	Westport - Te Kuha ..	5 7
			Te Kuha - Inangahua Junction	20
State Colliery, or Coal Creek Railway	Greymouth - Point Elizabeth Collieries	5 1	Greymouth - Runanga Colliery	5
	Extension ..	3 69	Runanga Colliery-Point Elizabeth Collieries	3 6
Greymouth-Hokitika	Greymouth - Hokitika	24 37	Greymouth-Hokitika	24 3
Kumara Branch	Kumara Branch	4 10	Kumara Branch ..	4 1
Hokitika-Ross	Hokitika-Ross ..	15 75	Hokitika-Ruatapu ..	7 1
			Ruatapu-Ross ..	7 2
			Survey to Ross Township	1 4
New survey	Ross-Waitaha ..	10 0	Ross-Waitaha ..	10
Picton-Waipara	Picton - Kaikoura	92 34	Picton-Seddon ..	33 4
			Seddon-Kaparu ..	6 3
			Kaparu-Ward ..	8 1
			Ward-Mirza ..	3 3
			Mirza-Mills ..	4 3
			Mills-Hapuka River	36 3
	Hapuka River-Mendip Hills	40 50	Hapuka River-Limestone Creek	23
			Limestone Creek-Conway River	7
			Conway River - Mendip Hills	10 5
	Mendip Hills - Parnassus	5 61	Mendip Hills ..	5 6
	Parnassus - Waipara	44 14	Parnassus-Mina ..	8 4
			Mina-Domett ..	3 6
			Domett-Tormore ..	3 1
			Tormore-Ethelton ..	5 2
			Ethelton-Scargill ..	8 5
			Scargill-Waipara ..	14 5
Hurunui-Waitaki, with Branches	Main Line ..	206 7	Culverden-South Waitaki	206
	Branches,—			
	Rangiora-Oxford	21 76	Rangiora-Oxford West	21 7
	Eyreton (from Main Line)	20 7	Main Line - West Eyreton-Bennett's	20
	Lyttelton ..	6 26	Lyttelton - Christchurch	6 2
	Southbridge ..	25 31	Hornby-Southbridge	25 3
	Little River-Akaroa	42 10	Lincoln-Little River	22 4
			Reconnaissance ..	19 4
	Springfield ..	30 60	Rolleston-Springfield	29 6
			Springfield-Coal-mine	0 7
	Whitecliffs ..	11 38	Darfield-Whitecliffs	11 3
			Whitecliffs to Bridge	0
	Rakaia-Ashburton Forks	22 20	Rakaia-Methven ..	22 2

Enclosure to Appendix E.

TABLE of LENGTHS of GOVERNMENT LINES AUTHORIZED, CONSTRUCTED, and SURVEYED up to 31st March, 1913.

NORTH ISLAND.

Appropriation.	Division.	Mileage.	Section.	Main Line.	Sidings.	Total.	Surveyed.	Under Formation.	Under Platelaying.	State of Line. Opened. Date.		1910–11	1911–12	1912–13						Total.
	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
		M. chs.		M. chs.	M. chs.	M. chs.	M. chs.	M. chs.	M. chs.		M. chs.	M. chs.	M. chs.	M. chs.	M. chs.	M. chs.	M. chs.	M. chs.	M. chs.	M. chs.
Kawakawa-Grahamtown (Onerahi)	Kawakawa ..	7 16	Opua Wharf-Kawakawa	7 16	0 57	7 73	..	..	..	..	..	..	..	..	..	..	..	..	..	7 16
	Kawakawa-Kamo ..	41 48	Kawakawa-Towai ..	21 18	0 61	21 79	..	..	..	12 April, 1911	..	..	21 18	..	..	..	..	..	..	21 18
			Towai-Hukerenui ..	4 30	0 33	4 63	..	..	..	2 May, 1910	..	1 30					..	..	..	
			Hukerenui-Kamo ..	16 0	3 29	19 29	..	..	..	..	.	..	..	..	..	..	..	.	..	27 2
	Kamo-Grahamtown	9 22	Kamo-Kioreroa ..	6 52	2 27	8 79	..	..	..	..	.	..	..	..	..	..	.	..	..	
			Kioreroa-Grahamtown Wharf	2 50	1 16	3 66	..	..	..	2 Oct., 1911	..	..	2 50	..	..	..	..	..	..	2 50
	Kawakawa-Hokianga	34 12	Kawakawa-Kaikohe	16 25	2 76	19 21	..	..	16 25	..	.	..	..	..	..	..	..	..	..	..
			Kaikohe-Hokianga ..	17 67	..	17 67	17 67	Prelim.	..	..		..	..	..	..	..	..	..	..	..
Kaihu Valley	Kaihu Valley ..	19 58	Dargaville-Booms ..	17 21	0 75	18 16	..	..	..	..	.	..	..	..	..	..	..	..	..	17 21
			Booms-Waima ..	2 37	..	2 37	..	0 63	1 54	..	..	..	..	..	..	..	..	..	..	..
North Auckland Railway	Kaipara Northwards	121 0	Extension ..	60 17	..	60 17	60 17	Estim.	..	..	..	..	..	..	..	..	..	..	..	..
			McCarrol's-Bickerstaffe	8 31	..	8 31	8 03	0 28	..	..	.	..	..	..	..	..	..	..	..	..
			Bickerstaffe-Otamatea	4 25	..	4 25	..	4 25	..	..	..	.	..	..	..	..	..	..	..	..
			Otamatea-Kaiwaka	2 45	1 45	4 10	..	1 75	0 50	..	..	..	..	..	..	..	..	..	..	..
			Kaiwaka-Te Hana ..	8 65	1 03	9 68	..	..	..	18 Mar. 1913		..	..	8 65	..	..	..	..	..	
			Te Hana-Wellsford ..	3 27	0 58	4 5	..	..	..	16 May, 1910		3 27	..	..	..	..	..	..	..	
			Wellsford-Wayby ..	3 18	0 28	3 46	..	..	..	1 April, 1909		..							..	
			Wayby-Hoteo ..	3 40	0 13	3 53	..	..	..	13 May, 1908		..	..	..	..	..	..	..	..	
			Hoteo-Kaipara Flats	2 45	0 13	2 58	..	..	..	11 June, 1907		..	..	..	..	..	..	..	..	
			Kaipara Flats-Woodcock's	3 5	0 16	3 21	.	..	..	17 Nov., 1905		..	..	..	..	..	..	..	..	45 42
			Woodcock's-Ahuroa	2 41	0 16	2 57	..	..	..	18 May, 1905		..	..	..	..	..	..	..	..	
			Ahuroa-Helensville ..	18 41	1 75	20 36	..	..	..	..		..	..	..	..	..	..	..	..	
Kaipara-Waikato	Kaipara-Newmarket	35 73	Helensville-Newmarket	35 73	6 66	42 59	..	..	..	..		..	..	..	..	..	..	..	..	35 73
	Onehunga Branch ..	2 73	Penrose-Onehunga Wharf	2 73	1 70	4 63	..	..	..	..		..	..	..	..	..	..	..	..	2 73
	Auckland-Waikato ..	100 13	Auckland-Te Awamutu	100 13	16 66	116 79	..	..	..	..		..	..	..	..	..	..	..	..	100 13
	Auckland-Penrose Deviation *via* Beach	6 50	Deviation *via* Beach	6 50	..	6 50	6 50	..	..	..		..	..	..						..
	Auckland City Branch—Kingsland Station to Auckland Station *via* Western Park and Freeman's Bay	2 60	Auckland City Branch	2 60	..	2 60	2 60	Prelim.	..	..										
Surveys, new lines	Pukekohe-Waiuku ..	12 5	Paerata-Waiuku ..	12 5	..	12 5	12 5	..	..	..		..	..	..	..	..	..	..	..	..
	Huntly-Awaroa ..	9 0	Huntly-Awaroa ..	9 0	..	9 0	6 0	3 0	..	..		..	..	..	..	..	..	..	..	..
	Paeroa-Pokeno ..	40 15	Paeroa-Pokeno ..	40 15	..	40 15	40 15	..	..	..		..	..	..	..	..	..	..	..	..
Waikato-Thames	Waikato-Thames ..	62 58	Frankton Junction-Thames	62 58	10 17	72 75	..	..	..	..		..	..	..	..	..	..	..	..	62 58
Paeroa-Waihi	Paeroa-Waihi ..	12 40	Paeroa-Waihi ..	12 40	1 30	13 70	..	..	..	9 Nov., 1905		.	..	..	..	..	..	..	..	12 40
East Coast Railway	Waihi-Opotiki, or East Coast Railway *via* Matata	124 0	Waihi-Tauranga ..	41 0	..	41 0	37 0	4 0	..	..			.	..	..	..	..	..	..	..
			Tauranga-Te Maunga Junction	4 0	..	4 0	.	..	4 0	..		..								..
			Te Maunga Junction-Te Puke	9 0	1 15	10 15	..		9 0	..		..	..	..	..	..	..	..	..	..
			Te Puke-Paengaroa ..	5 65	1 11	71 4	.. *	5 25	0 40	..		..	..	..	..	..	..	..	..	..
			Paengaroa-Opotiki ..	64 15	..		64 15	..	..	..		..	..	..	..	..	..	..	..	..
	Branch	4 27	Mount Maunganui-Te Maunga Junction	4 27	1 66	9 13	..	..	4 27	..		..								
Hamilton-Cambridge	Hamilton-Cambridge	12 2	Ruakura Junction-Cambridge	12 2	3 14	15 16	..	..	..	..		..	..	..	..	..	..	..	..	12 2
Thames Valley-Rotorua	Thames Valley-Rotorua	69 33	Morrinsville-Rotorua	69 33	5 27	74 60	..	..	..	..		..	..	..	..	..	..	..	..	69 33
Gisborne-Rotorua	Gisborne-Opotiki ..	93 36	Gisborne Wharf-Kaiteratahi	13 10	2 45	15 55	..	..	..	..		..	..	..	..	..	..	..	..	
			Kaiteratahi-Karaka	5 5	0 71	5 76	..	..	..	13 April, 1905		..	..	..	..	..	..	..	..	
			Karaka-Puha ..	1 75	0 24	2 19	..	..	..	20 May, 1907		..	..	..	..	..	..	..	..	
			Puha-Waikohu Bridge	3 29	..	3 29	.	..	..	28 May, 1908		..	..	..	..	..	..	..	..	31 69
			Waikohu Bridge-Waikohu	0 35	0 32	0 67	..	..	..	1 April, 1909		..	..	..	..	..				
			Waikohu-Otoko ..	7 75	0 32	8 27	..	..	..	6 April, 1912		..	..	7 75	..	..	..	..	..	..
			Otoko-Rakauroa ..	6 60	0 32	7 12	..	..	6 60	..		..	..	..	..	..	..	..	..	..
			Rakauroa-Matawai ..	5 65	0 50	6 35	..	..	5 65	..		..	..	..	..	..	..	..	..	.
			Matawai-Motu ..	8 0	..	8 0	4 20*	3 60	..	..		..	..	..	..	..	..	..		
			Motu-Opotiki ..	41 2	..	41 2	41 2	Estim.	..	..		..	..	..	..	..	..	..	.	
New survey	Napier-Gisborne	120 0	Napier-West Shore	3 37	..	3 37	3 12	0 25	..	..		..	..	..	..	..	..	..	..	..
			West Shore-Petane	3 57	..	3 57	..	3 57	..	..		..	..	..	..	..	..	..	..	..
			Petane-Eskdale ..	3 35	..	3 35	0 35	3 0	..	..		..	..	..	..	..	..	..	..	..
			Eskdale-Wairoa ..	47 31	..	47 31	47 31	Prelim.	..	..		..	..	..	..	..	..	..	..	..
			Wairoa River-Gisborne	62 0	..	62 0	49 69	12 11	..	..		..	..	..	..	..	..	..	..	..
Napier-Woodville and Palmerston North	Napier-Woodville ..	96 65	Napier Spit-Woodville	96 65	15 5	111 70	..	..	..	..		..	..	..	..	..	..	..	..	96 65
	Woodville-Palmerston North	17 21	Woodville-Palmerston North	17 21	0 51	17 72	..	..	..	..		..	..	..	..	..	..	..	..	17 21
Wellington-Woodville	Woodville-Wellington	115 79	Woodville-Wellington Te Aro	115 79	21 73	137 72	..	..	..	..		..	..	..	..	..	..	..	..	115 79
	Greytown Branch ..	3 7	Woodside-Greytown	3 7	0 64	3 71	..	..	..	..		..	..	..	..	..	..	..	..	3 7
Rimutaka Incline Deviation Surveys	Coach-road Route ..	9 0	Kaitoke-Featherston	9 0	..	9 0	9 0	Prelim.	..	..		..	..	..	..	..	..	..	..	
	Tauherenikau Route	21 30	Upper Hutt-Woodside	21 30	..	21 30	21 30	..	..	..		..	..	..	..	..	..	..	..	.
	Wainui-o-mata Route	31 40	Petone-Pigeon Bush	31 40	..	31 40	31 40	..	..	..		..	..	..	..	..	..	..		
	Coast Route ..	52 0	Petone-Pigeon Bush	52 0	..	52 0	52 0	..	..	..		..	..	..	..	..	..	..	..	..
	Coast Route ..	70 0	Petone-Carterton, *via* Martinborough	70 0	..	70 0	70 0	..	..	..		..	..	..	..	..	..			
	Wellington-Manawatu	83 37	Wellington-Longburn	83 37	15 76	99 33	..	..	..	7 Dec., 1908†		..	..	..	..	..	..	..	..	83 37
Foxton-New Plymouth	Foxton-Patea ..	120 44	Foxton-Patea ..	120 44	14 75	135 39	..	..	..	..		..	..	..	..	..	..	..	..	120 44
	Route Improvement Surveys	26 7	Turakina-Matarawa	11 67	.	11 67	11 67	..	..	..		..	..	..	..	..	..	..	..	.
			Aramoho-Goat Valley Tunnel	7 40	..	7 40	7 40	..	..	..		..	..	..	..	..	..	..	..	
			Kai Iwi-Okehu ..	3 60	..	3 60	3 60	..	..	..		..	..	..	..	..	..	..	..	..
			Nukumaru-Waitotara	3 0	..	3 0	3 0	Prelim.	..	..		..	..	..	..	..	..	..	..	..
	Patea-Waitara and New Plymouth	72 29	Patea-New Plymouth Breakwater	72 29	11 52	84 1	..	..	..	..		..	..	..	..	..	..	..	..	72 29
	Bull's Branch ..	3 79	Bull's Branch ..	3 79	..	3 79	3 79	Prelim.	..	..		..	..	..	..	..	..	..	..	..
	Wanganui Branch ..	3 29	Aramoho-Wanganui	3 29	2 23	5 52	..	..	..	..		..	..	..	..	..	..	..	..	3 29
Stratford Main Trunk	Stratford-Main Trunk	94 70	Stratford-Toko ..	6 26	0 40	6 66	..	..	..	..		..	..	..	..	..	.			
			Toko-Oruru ..	4 72	0 36	5 28	..	..	..	1 Mar., 1905		..	..	..	..	..	..	..	..	
			Oruru-Huiroa ..	4 50	0 35	5 5	..	..	..	1 April, 1908		..	..	..	..	..	..	..	..	31 40
			Huiroa-Te Wera ..	6 77	1 16	8 13	..	..	..	20 June, 1910		6 77	..	..	..	..	..	..		
			Te Wera-Pohokura ..	8 55	0 65	9 40	..	..	..	1 Aug., 1912		..	..	8 55	..	..	..			
			Pohokura-Whangamomona	6 13	0 45	6 58	..	0 42	5 51	..		..	..	..	..	..	..	..	..	..
			Whangamomona-Tahora	9 57	1 0	10 57	3 30	5 56	1 51	..		..	..	..	..	..	..	..	..	..
			Tahora-Matiere ..	37 17	..	37 17	37 17	Prelim.	..	..		..	..	..	..	..	..			
			Okahukura-Matiere ..	10 23	..	10 23	8 23	2 0	..	..		..	..	..	..	..	..	..	..	..
	Stratford-Ongarue Deviations	33 40	Mangaroa-Puketutu	33 40	..	33 40	33 40	Prelim.	..	..		..	..	..	..	..	..			
		14 0	Aramatai-Hangatiki	14 0	..	14 0	14 0	Prelim.	..	..		..	..	..	..	..	..	..	..	..
	Puketutu-Mangaroa Deviation	30 0	..	30 0	..	30 0	30 0	Prelim.	..	..		..	..	..	..	..	..			
	Opunake Mountain Road	23 10	Opunake-Eltham ..	23 10	..	23 10	23 10	Prelim.	..	..		..	..	..	..	..	..	..	..	
		22 0	Opunake-Te Roti ..	22 0	..	22 0	22 0	Prelim.	..	..		..	..	..	..	..	..	..	..	.
		25 58	Opunake-Stratford ..	25 58	..	25 58	25 58	Prelim.	..	..		..	..	..	..	..	..	..	..	..
	Mount Egmont Branch	9 14	Mangaonui Section ..	6 0	2 3	8 3	..	..	..	1 April, 1908		..	..	..	..	..	..	..	..	6 0
			Quarry Section ..	3 14	0 60	3 74	..	2 58	0 36	..		..	..	..	..	..	..	..		
North Island Main Trunk Railway	Marton-Te Awamutu	209 69	Marton Junction-Mangaweka	31 67	4 61	36 48	..	..	..	..		..	..	..	..	..	..	..	..	
			Mangaweka-Taihape	13 1	1 61	14 62	..	..	..	10 Sep., 1904		..	..	..	..	..	..	..	..	50 58
			Taihape-Mataroa ..	5 70	0 61	6 51	..	..	..	1 June, 1907		..	..	..	..	..	..	..	..	
			Mataroa-Waiouru ..	18 10			..	..	..	30 June, 1908		..	..	..	..	..	..	..	..	
			Waiouru-Erua ..	30 63	12 50	97 28	..	..	..	13 Feb., 1909		..	..	..	..	..	..	..	..	84 58
			Erua-Taumarunui ..	35 65			..	..	..	9 Nov., 1908		..	..	..	..	..	..	..	.	
			Taumarunui-Te Awamutu	71 33	6 20	80 53	..	..	..	..		..	..	..	..	..	..	..	..	74 33
	Ohakune-Raetihi Branch	8 0	Raetihi Section ..	8 0	..	8 0	7 0	1 0	..	..	..	..	..	..	..	..	..	.		
	Central Route Deviation Surveys	30 0	Ohakune to Mokau-Retaruke Divide	30 0	..	30 0	30 0	Prelim.	..	..	..	..	..	..	..	..	..	..	..	
		34 0	Makatote Gorge-Marae Kowhai	34 0	..	34 0	34 0	Prelim.	..	..	..	..	..	..	..	..	..	..	..	
		20 0	Marae-Kowhai-Ohura Valley	20 0	..	20 0	20 0	Explor.	..	..	..	..	..	..	..	..	..	..	..	..
	Ngaire-Ongarue ..	103 58	Ngaire Section ..	38 73	..	38 73	38 73	..	..	..	..	..	..	..	..	..	..	..	..	
			Tangarakau Section	26 0	..	26 0	26 0	..	..	..	..	..	..	..	..	..	..	..	.	
			Heao Section ..	10 70	..	10 70	10 70	..	..	..	..	..	..	..	..	..	..	..	..	..
			Ohura Section ..	27 75	..	27 75	27 75	..	..	..	..	..	..	..	..	..	..	..	..	..
	Waitara-Tangarakau	46 75	Waitara Section ..	46 75	..	46 75	46 75	..	..	..	..	..	..	..	..	..	..	..	..	..
	Urenui Route ..	12 0	Urenui to Tangitu River	12 0	..	12 0	12 0	Prelim.	..	..	..	..	..	..	..	..	..	..	..	.
	Hastings-Te Awamutu	170 0	Hastings-Te Awamutu	170 0	..	170 0	170 0	Prelim.	..	..	..	..	..	..	..	..	..	..	..	..
Totals ..	..	2554 62	..	2554 62	194 34	2749 16	1235 68	54 45	56 59	..	1144 53	14 54	23 68	25 35	..	..	..	..	..	1208 50

* Approximate. † Date of purchase.

NOTE.—For detail information as to dates of openings of such portions of lines as are not given in this table see columns 11 to 12 of returns of lengths of line in Public Works Statement 1904–10.

NOTE.—Taonui and Lichfield Branches not mentioned above, as the rails have been taken up.

TABLE of LENGTHS of GOVERNMENT LINES AUTHORIZED, CONSTRUCTED, and SURVEYED up to 31st March, 1913—*continued*.

SOUTH ISLAND

Appropriation.	Division.	Mileage.	Section.	Main Line.	Sidings.	Total.	State of Line.													
							Surveyed.	Under Formation.	Under Plate-laying.	Opened.										
										Date.	—	1910-11.	1911-12.	1912-13.	—					Total.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
		M. ch.		M. ch.	M. ch.	M. ch.	M. ch.	M. ch.	M. ch.		M. ch.	M. ch.	M. ch.	M. ch.	M. ch.	M. ch.	M. ch.	M. ch.	M. ch.	M. ch.
Nelson-Roundell	Nelson-Belgrove	22 73	Nelson-Belgrove	22 73	2 52	25 45	..	..	..	..	..	..	..	..	..	..	..	..	..	22 73
Midland Railway	Stillwater-Belgrove (*via* Tadmor)	147 7	Stillwater-Reefton S.	37 30	4 79	42 29	..	..	..	..	..	..	..	..	..	..	..	..	..	37 30
			Reefton S.-Reefton N.	1 30	1 0	2 30	..	..	..	31 Mar., 1907	..	..	..	..	..	..	..	..	..	1 30
			Reefton N.-Cronadun	5 38	0 56	6 14	..	..	..	7 Aug., 1908	..	..	..	..	..	..	..	..	..	5 38
			Cronadun-Landing	8 40	0 45	9 5	..	..	8 40	..	..	..	..	..	..	..	..	..	..	
			Landing-Inangahua	6 0	0 10	6 10	1 26	..	4 54	..	..	..	..	..	..	..	..	..		
			Inangahua-Kawatiri	46 43	..	46 43	46 43	..	..	..	..	..	..	..	..	..	..	..		
			Glenhope-Kawatiri	4 5	0 15	4 20	0 74	3 11	..	..	..	..	..	9 42	..	..	..	..	..	..
			Glenhope-Tui	9 42	0 55	10 17	..	..	..		..	..	..	3 17	..	..	..	..	..	
			Tui-Kiwi	3 17	0 34	3 51	..	..	..	2 Sept., 1912	..	..	..	..	..	..	..	..	..	12 59
			Kiwi-Tadmor	5 9	0 29	5 38	..	..	..	18 Dec., 1908	..	..	..	..	..	..	..	..	..	5 9
			Tadmor-Kohatu	10 29	0 69	11 18	..	..	..	7 Aug., 1906	..	..	..	..	..	..	..	..	..	10 29
			Kohatu-Belgrove	9 44	0 62	10 26	..	..	..	..	..	..	..	..	..	..	..	..	..	9 44
	Brunner-Springfield	92 64	Brunner-Otira	42 27	2 68	45 15	..	..	..	..	..	..	..	..	..	..	..	..	..	42 27
			Rolleston Section	1 2	..	1 2	..	..	1 2											
			Tunnel Contract	8 0	..	8 0	..	8 0	..	..										
			Tunnel Contract-Cass	13 75	0 20	14 15	..	1 40	12 35	..	..	..	..	..	..	..	..	..	..	
			Cass-Broken River	15 22	1 29	16 51	..	..	..	10 Dec., 1910	..	15 22	..	..	..	..	..	..	..	
			Broken River-Otarama	7 40	0 30	7 70	..	..	..	29 Oct., 1906	..	..	..	..	..	..	..	..	..	27 40
			Otarama-Springfield	4 58	0 16	4 74	..	..	..	..	..	..	..	..	..	..	..	..	..	
Blackball Railway	Ngahere-Blackball	3 40	Ngahere-Blackball	3 40	1 20	4 60	..	..	..	16 July, 1910	..	3 40	..	..	..	..	..	..	..	3 40
Greymouth-Nelson Creek	Greymouth-Nelson Creek	7 51	Greymouth-Brunnerton-Stillwater	7 51	6 18	13 69	..	..	..	..	..	..	..	..	..	..	..	..	..	7 51
Westport-Ngakawau	Westport-Ngakawau	19 56	Westport-Ngakawau	19 56	8 12	27 68	..	..	..	..	..	..	..	..	..	..	..	..	..	19 56
Westport-Ngakawau Extension	Ngakawau-Mokihinui	7 12	Ngakawau-Mokihinui	7 12	1 18	8 30	..	..	..	..	..	..	..	..	..	..	..	..	..	7 12
	Mokihinui Colliery Line	3 69	Mokihinui-Seddonville	3 69	0 25	4 14	..	..	..	..	..	..	..	..	..	..	..	..	..	3 69
Westport-Inangahua	Westport-Inangahua Junction	26 0	Westport-Te Kuha	5 74	0 10	6 4	..	..	..	1 April, 1912	..	..	..	5 74	..	..	..	..	..	5 74
			Te Kuha-Inangahua Junction	20 6	..	20 6	16 6	4 0	..	..	..	..	..	..	..	..	..	..	..	..
State Colliery, or Coal Creek Railway	Greymouth-Point Elizabeth Collieries	5 1	Greymouth-Runanga Colliery	5 1	2 10	7 11	..	..	..	1 Dec., 1904	..	..	..	..	..	..	..	..	..	5 1
	Extension	3 69	Runanga Colliery-Point Elizabeth Collieries	3 69	2 20	6 9	..	..	3 69											
Greymouth-Hokitika	Greymouth-Hokitika	24 37	Greymouth-Hokitika	24 37	2 10	26 47	..	..	..	..	..	..	..	..	..	..	..	..	..	24 37
Kumara Branch	Kumara Branch	4 10	Kumara Branch	4 10	..	4 10	4 10	..	..	..	..	..	..	..	..	..	..	..	..	..
Hokitika-Ross	Hokitika-Ross	15 75	Hokitika-Ruatapu	7 10	0 61	7 71	..	..	..	9 Nov., 1906		..	..	..	..	..	..	..	..	7 10
			Ruatapu-Ross	7 21	0 69	8 10	..	..	..	1 April, 1909		..	..	..	..	..	..	..	..	7 21
			Survey to Ross Township	1 44	..	1 44	1 44	..	..	..		..	..	..	..	..	..	..	..	..
New survey	Ross-Waitaha	10 0	Ross-Waitaha	10 0	..	10 0	2 54	..	..	..		..	..	..	..	..	..	..	..	
Picton-Waipara	Picton-Kaikoura	92 34	Picton-Seddon	33 45	3 26	36 71	..	..	..	..		..	..	..						
			Seddon-Kaparu	6 30	0 76	7 26	..	..	..	13 April, 1911		..	6 30	..	..	..	..	..	..	48 9
			Kaparu-Ward	8 14	1 20	9 34	..	..	..			..	8 14	..	..	..	..	..	..	
			Ward-Mirza	3 35	0 40	3 75	..	3 35	..	..				..		..	..	..	..	
			Mirza-Mills	4 38	..	4 38	..	4 38	..	..		..	..		..	..			..	
			Mills-Hapuka River	36 32	..	36 32	36 32	..	..	..										
	Hapuka River-Mendip Hills	40 50	Hapuka River-Limestone Creek	23 0	..	23 0	23 0	Prelim	..	..										..
			Limestone Creek-Conway River	7 0	..	7 0	..	..	..	..		..	..	..	..	..	..	..	..	
			Conway River-Mendip Hills	10 0	..	10 50	..	..	..	..										
	Mendip Hills-Parnassus	5 61	Mendip Hills	5 61	..	5 61	2 0	3 61	..	..		..	..	..	..	..	..	..	..	
	Parnassus-Waipara	44 14	Parnassus-Mina	8 43	1 14	9 57	..	..	..	1 Sept., 1912		..	..	8 43	..		..	..	..	
			Mina-Domett	3 63	0 70	4 53	..	..	..	1 Aug., 1910		3 63	..	..			..	..	..	
			Domett-Tormore	3 30	0 66	9 24	..	..	..	14 Nov., 1906		..	..	..	..	..	..	..	..	44 14
			Tormore-Ethelton	5 8			..	..	..	21 Mar., 1907		..	..	..	..	..	..	..	..	
			Ethelton-Scargill	8 51	0 51	9 22	..	..	..	3 Nov., 1905		..	..	..	..	..	..	..	..	
			Scargill-Waipara	14 59	1 2	15 61	..	..	..	..		..	..	..	..	..	..	..	..	
Hurunui-Waitaki, with Branches	Main Line	206 7	Culverden-South Waitaki	206 7	64 68	270 75	..	..	..	..		..	..	..	..	..	..	..	..	206 7
	Branches,—																			
	Rangiora-Oxford	21 76	Rangiora-Oxford West	21 76	2 36	24 32	..	..	..	..		..	..	..	..	..	..	..	..	21 76
	Eyreton (from Main Line)	20 7	Main Line-West Eyreton-Bennett's	20 7	1 61	21 68	..	..	..	..		..	..	..	..	..	..	..	..	20 7
	Lyttelton	6 26	Lyttelton-Christchurch	6 26	..	6 26	..	..	..	..		..	..	..	..	..	..	..	..	6 26
	Southbridge	25 31	Hornby-Southbridge	25 31	3 17	28 48	..	..	..	..		..	..	..	..	..	..	..	..	25 31
	Little River-Akaroa	42 10	Lincoln-Little River	22 46	2 5	24 51	..	..	..	..		..		..	..	..	..	..	..	22 46
			Reconnaissance	19 44	..	19 44	19 44	Prelim.	..	..										..
	Springfield	30 60	Rolleston-Springfield	[illegible]	3 7	33 67	..	..	..	..		..	..	..	..	..	..	..	..	30 60
			Springfield Coal-mine	[illegible]																
	Whitecliffs	11 38	Darfield-Whitecliffs	11 33	1 53	13 11	..	..	..	..		..	..	..	..	..	..	..	..	11 38
			Whitecliffs to Bridge	0 5																
	Rakaia-Ashburton Forks	22 20	Rakaia-Methven	22 20	2 65	25 5	..	..	..	..		..	..	..	..	..	..	..	..	22 20
	Ashburton	29 46	Tinwald-Springburn	27 29	1 52	29 1	..	..	..	..		..	..	..	..	..	..	..	..	27 29
			Extension	2 17	..	2 17	2 17	..	..	..		..	..	..	..	..	..	..	..	..
	Opawa and Albury to Fairlie Creek and Burke's Pass	55 8	Washdyke-Eversley	36 5	2 45	38 50	..	..	..	..		..	..	..	..	..	..	..	..	36 5
			Preliminary survey	19 3	..	19 3	19 3	Prelim.	..	..		..	..	..	..	..	..	..	..	..
	Waimate	4 42	Studholme-Waimate	4 42	1 3	5 45	..	..	..	..		..	..	..	..	..	..	..	..	4 42
	Waimate Gorge	8 21	Waimate-Waihao Downs	8 21	0 54	8 75	..	..	..	..		..	..	..	..	..	..	..	..	8 21
Canterbury Interior Main Line	Oxford-Temuka	83 0	Oxford-Sheffield	11 44	0 27	11 71	..	..	..	..		..	..	..	..	..	..	..	..	11 44
			Surveyed	21 7	..	21 7	21 7	..	..	..		..	..	..	..	..	..	..	..	..
			Reconnaissance	50 29	..	50 29	50 29	Prelim.	..	..								..		
Waitaki-Bluff and Branches	Main Line	246 69	South Waitaki-Bluff	246 69	59 13	306 2	..	..	..	..		..	..	..	..	..	..	..	..	246 69
	Branches,—																			
	Duntroon	21 75	Pukeuri-Duntroon	21 75	1 35	23 30	..	..	..	..		..	..	..	..	..	..	..	..	21 75
	Duntroon-Hakateramea	15 38	Duntroon-Hakateramea	15 38	1 5	16 43	..	..	..	..		..	..	..	..	..	..	..	..	15 38
	Ngapara	14 76	Waiareka-Ngapara	14 76	1 31	16 27	..	..	..	..		..	..	..	..	..	..	..	..	14 76
	Livingstone	16 40	Windsor-Tokorahi	12 0	0 50	12 50	..	0 5	..	..		..	..	..	..	..	..	..	..	11 75
			Survey (trial)	4 40	..	4 40	4 40	Prelim	..	..		..	..	..	..	..	..	..	..	..
	Palmerston-Waihemo	9 40	Palmerston-Dunback	8 55	0 54	9 29	..	..	..	..		..	..	..	..	..	..	..	..	8 55
			Surveyed	0 65	..	0 65	0 65	..	..	..		..	..	..	..	..	..	..	..	..
	Inch Valley Railway	2 29	Inch Valley-Lime Kiln	2 29	0 23	2 52	..	..	..	..		..	..	..	..	..	..	..	..	2 29
	Port Chalmers	1 9	Glendermid-Port Chalmers	1 9	3 40	4 49	..	..	..	..		..	..	..	..	..	..	..	..	1 9
	Green Island	2 44	Burnside-Saddle Hill	2 44	0 52	3 16	..	..	..	..		..	..	..	..	..	..	..	..	2 44
	Green Island to Brighton	4 65	Surveyed	4 65	..	4 65	4 65	..	..	..		..	..	..	..	..	..	..	..	..
	Fernhill Colliery Line	1 60	Abbotsford to Fernhill Colliery	1 60	0 24	2 4	..	..	..	..		..	..	..	..	..	..	..	..	1 60
	Kaikorai Valley Railway	2 60	Surveyed	2 60	..	2 60	2 60	..	..	..								..	..	
	Outram	8 78	Mosgiel-Outram	8 78	0 68	9 66	..	..	..	..		..	..	..	..	..	..	..	..	8 78
	Lawrence	21 76	Clarksville-Lawrence	21 76	2 2	23 78	..	..	..	..		..	..	..	..	..	..	..	..	21 76
	Lawrence-Roxburgh	37 14	Lawrence-Big Hill	7 37	0 44	8 1	..	..	..	1 Aug., 1910		7 37	..	..	..	..	..	..	..	7 37
			Big Hill-Beaumont	5 36	0 54	6 10	0 69	4 47	..	..		..	..	..	..	..	..	..	..	..
			Beaumont-Roxburgh	24 21	..	24 21	24 21	..	..	..		..	..	..	..	..	..	..	..	..
	Balclutha-Appleby Junction, or Catlin's–Seaward Bush	105 41	Balclutha-Owaka	19 20	1 63	21 3	..	..	..	..		..	..	..	..	..	..	..	..	19 20
			Owaka-Catlin's	3 38	0 30	3 68	..	..	..	1 Aug., 1904		..	..	..	..	..	..	..	..	3 38
			Catlin's-Houipapa	2 30	0 9	2 39	..	..	..	17 Dec., 1909		..	..	..	..	..	..	..	..	2 30
			Houipapa-Puketiro	7 22	0 43	7 65	..	..	7 65	..		..	..	..	..	..	..	..	..	..
			Puketiro-Papatowai	5 29	0 55	6 4	..	2 25	3 04	..		..	..	..	..	..	..	..	..	..
			Papatowai-Wharuarimu	5 0	0 10	5 10	1 0	4 0	..	..		..	..	..	..	..	..	..	..	..
			Wharuarimu-Marinui	23 63	..	23 63	23 63	Prelim.	..	..										
			Marinui-Tokanui	6 0	..	6 0	6 0	..	..	..		..	..			..	..	..	..	..
			Tokanui-Waimahaka	8 27	0 64	9 11	..	..	..	20 Sept. 1911		..	8 27	..	..	..	..	..	..	8 27
			Waimahaka-Appleby	24 52	1 50	26 22	..	..	..	..		..	..	..	..	..	..	..	..	24 52
	Waipahi-Heriot Burn	20 3	Waipahi-Heriot	20 3	2 3	22 6	..	..	..	..		..	..	..	..	..	..	..	..	20 3
	Heriot Extension	6 20	Heriot-Eadievale	6 20	0 45	6 65	..	..	..	15 Feb., 1905		..	..	..	..	..	..	..	..	6 20
	Extension to Roxburgh, *via* Rae's Junction and Ettrick	28 10	Surveyed	28 10	..	28 10	28 10	Prelim.	..	..		..	..	..	..	..	..	..	..	..
	Via Spylaw	25 70	Surveyed	25 70	..	25 70	25 70	Prelim.	..	..	..	..	..	..	..	..	..	..	..	..
	Waimea Plains District Ry.	36 39	Gore-Lumsden	36 39	1 34	37 73	..	..	..	..		..	..	..	..	..	..	..	..	36 39
	Kelso-Gore	24 0	Surveyed	9 58	..	9 58	9 58	..	..							..	..	..	..	..
			Preliminary survey	14 22	..	14 22	14 22	Prelim.	..	..	..	..	..	..	..	..	..	..	..	..
	Gore-Waikaka	12 65	Waikaka Section	12 65	1 51	14 36	..	..	..	26 Nov., 1908	..	..	..	..	..	..	..	..	..	12 65
	Riversdale-Switzers	13 70	Riversdale-Waikaia	13 70	1 40	15 30	..	..	..	1 Oct., 1909	..	..	..	..	..	..	..	..	..	13 70
	Edendale-Toitois	19 30	Edendale-Glenham	9 36	0 72	10 28	..	..	..	..	..	..	..	..	..	..	..	..	..	9 36
			Surveyed	9 74	..	9 74	9 74	..	..	..	..	..	..	..	..	..	..	..	..	
Otago Central	Waitaki-Bluff Main Line to Lake Hawea	182 56	Wingatui-Ida Valley	98 18	5 62	104 0	..	..	..	..	..	..	..	..	..	..	..	..		
			Ida Valley-Omakau	13 20	1 16	14 36	..	..	..	1 Sept., 1904	..	..	..	..	..	..	..			
			Omakau-Chatto Creek	7 36	0 34	7 70	..	..	..	14 July, 1906	..	..	..	..	..	..	..	..	..	134 76
			Chatto Ck.-Alexandra	10 39	1 6	11 45	..	..	..	15 Dec., 1906	..	..	..	..	..	..	..			
			Alexandra-Clyde	5 45	0 77	6 42	..	..	..	27 Mar., 1907	..	..	..	..	..	..	..			
			Surveyed	47 58	..	47 58	47 58	..	..	..	..	..	..	..	..	..	..	..	..	..
Invercargill-Kingston and Branch, Lumsden-Mararoa	Invercargill-Kingston	87 4	Invercargill-Kingston Wharf	87 4	5 15	92 19	..	..	..	..	..	..	..	..	..	..	..	..	..	87 4
	Lumsden-Mararoa	30 0	Lumsden-Mossburn	10 40	1 0	11 40	..	..	..	..	..	..	..	..	..	..	..	..	..	10 40
			Surveyed	8 20	..	8 20	8 20	..	..	..	..	..	..	..	..	..	..	..	..	..
			Reconnaissance	11 20	..	11 20	11 20	Prelim.	..	..	..	..	..	..	..	..	..	..	..	..
Forest Hill Railway	Winton to Hedgehope	12 40	Winton-Hedgehope	12 40	0 65	13 25	..	..	..	..	..	..	..	..	..	..	..	..	..	12 40
Western Railways	Orepuki Branch	35 41	Makarewa-Orepuki	35 41	6 37	64 13	..	..	..	..	..	..	..	..	..	..	..	..	..	35 41
	Otautau Branch	22 15	Thornbury-Wairio	22 15			..	..	..	..	..	..	..	..	..	..	..	..	..	22 15
Orepuki-Waiau River	Orepuki-Waiau	13 30	Orepuki-Wainoaka	4 48	0 58	5 26	..	..	..	..	..	..	..	..	..	..	..	..	..	4 48
			Waihoaka-Tuatapere	8 7	1 10	9 17	..	..	..	1 Oct., 1909	..	..	..	..	..	..	..	..	..	8 7
			Surveyed	0 55	..	0 55	0 55	..	..	..	..	..	..	..	..	..	..	..	..	..
	Totals	2228 22	..	2228 22	254 44	2482 66	471 39	39 22	41 29	..	1,571 48	30 2	22 71	27 16	..	..	..	..	..	1651 57

For detail information as to dates of openings of such portions of lines as are not given in this table see columns 11 to 44 of tables of lengths of lines in Public Works Statement 1904-10.

INES AUTHORIZED, CONSTRUCTED, and SURVEYED up to 31st March, 1913—*continued.*

SOUTH ISLAND.

Sidings.	Total.	State of Line.													
		Surveyed.	Under Formation.	Under Platelaying.	Opened.										
					Date.	—	1910-11.	1911-12.	1912-13.	—	—	—	—	—	Total.
6 M. ch.	7 M ch.	8 M. ch.	9 M. ch.	10 M. ch.	11	12 M. ch.	13 M. ch.	14 M. ch.	15 M. ch.	16 M. ch.	17 M. ch.	18 M. ch.	19 M. ch.	20 M. ch.	21 M. ch.
2 52	25 45	..	..	..	..	..	..	..	..	..	..	..	..	..	22 73
4 79	42 29	..	..	..	..	..	..	..	..	..	..	..	..	..	37 30
1 0	2 30	..	..	..	31 Mar., 1907	..	..	..	..	..	..	..	..	..	1 30
0 56	6 14	..	..	..	7 Aug., 1908	..	..	..	..	..	..	..	..	..	5 38
0 45	9 5	..	..	8 40	..	..	..	..	..	..	..	..	..	..	..
0 10	6 10	1 26	..	4 54	..	..	..	..	..	..	..	..	..	..	..
..	46 43	46 43	..	..	..	..	..	..	..	..	..	..	..	..	..
0 15	4 20	0 74	3 11	..	..	..	..	..	9 42	..	..	..	..	..	..
0 55	10 17	..	..	..	2 Sept., 1912	..	..	..	3 17	..	..	..	..	..	12 59
0 34	3 51	..	..	..		..	..	..	..	..	..	..	..	..	
0 29	5 38	..	..	..	18 Dec., 1908	..	..	..	..	..	..	..	..	..	5 9
0 69	11 18	..	..	..	7 Aug., 1906	..	..	..	..	..	..	..	..	..	10 29
0 62	10 26	..	..	..	..	..	..	..	..	..	..	..	..	..	9 44
2 68	45 15	..	..	..	..	..	..	..	..	..	..	..	..	..	42 27
..	1 2	..	..	1 2	..	..	..	..	..	..	..	..	..	..	..
..	8 0	..	8 0	..	..	..	..	..	..	..	..	..	..	..	..
0 20	14 15	..	1 40	12 35	..	..	..	..	..	..	..	..	..	..	..
1 29	16 51	..	..	..	10 Dec., 1910	..	15 22	..	..	..	..	..	..	..	27 40
0 30	7 70	..	..	..	29 Oct., 1906	..	..	..	..	..	..	..	..	..	
0 16	4 74	..	..	..	..	..	..	..	..	..	..	..	..	..	
1 20	4 60	..	..	..	16 July, 1910	..	3 40	..	..	..	..	..	..	..	3 40
6 18	13 69	..	..	..	..	..	..	..	..	..	..	..	..	..	7 51
8 12	27 68	..	..	..	..	..	..	..	..	..	..	..	..	..	19 56
1 18	8 30	..	..	..	..	..	..	..	..	..	..	..	..	..	7 12
0 25	4 14	..	..	..	..	..	..	..	..	..	..	..	..	..	3 69
0 10	6 4	..	..	..	1 April, 1912	..	..	..	5 74	..	..	..	..	..	5 74
..	20 6	16 6	4 0	..	..	..	..	..	..	..	..	..	..	..	..
2 10	7 11	..	..	..	1 Dec., 1904	..	..	..	..	..	..	..	..	..	5 1
2 20	6 9	..	..	3 69	..	..	..	..	..	..	..	..	..	..	..
2 10	26 47	..	..	..	..	..	..	..	..	..	..	..	..	..	24 37
..	4 10	4 10	..	..	..	..	..	..	..	..	..	..	..	..	..
0 61	7 71	..	..	..	9 Nov., 1906		..	..	..	..	..	..	..	..	7 10
0 69	8 10	..	..	..	1 April, 1909		..	..	..	..	..	..	..	..	7 21
..	1 44	1 44	..	..	..		..	..	..	..	..	..	..	..	..
..	10 0	2 54	..	..	..		..	..	..	..	..	..	..	..	..
3 26	36 71	..	..	..	..		..	..	..	..	..	..	..	..	48 9
0 76	7 26	..	..	..	13 April, 1911		..	6 30	..	..	..	..	..	..	
1 20	9 34	..	..	..			..	8 14	..	..	..	..	..	..	
0 40	3 75	..	3 35	..	..		..	..	..	..	..	..	..	..	..
..	4 38	..	4 38	..	..		..	..	..	..	..	..	..	..	..
..	36 32	36 32	..	..	..		..	..	..	..	..	..	..	..	..
..	23 0	23 0	Prelim.	..	..		..	..	..	..	..	..	..	..	..
..	7 0	..	..	..	..		..	..	..	..	..	..	..	..	..
..	10 50	..	..	..	..		..	..	..	..	..	..	..	..	..
..	5 61	2 0	3 61	..	..		..	..	..	..	..	..	..	..	..
1 14	9 57	..	..	..	1 Sept., 1912		..	..	8 43	..	..	..	..	..	..
0 70	4 53	..	..	..	1 Aug., 1910		3 63	..	..	..	..	..	..	..	44 14
0 66	9 24	..	..	..	14 Nov., 1906		..	..	..	..	..	..	..	..	
		..	..	..	21 Mar., 1907		..	..	..	..	..	..	..	..	
0 51	9 22	..	..	..	3 Nov., 1905		..	..	..	..	..	..	..	..	
1 2	15 61	..	..	..	..		..	..	..	..	..	..	..	..	
64 68	270 75	..	..	..	..		..	..	..	..	..	..	..	..	206 7
2 36	24 32	..	..	..	..		..	..	..	..	..	..	..	..	21 76
1 61	21 68	..	..	..	..		..	..	..	..	..	..	..	..	20 7
..	6 26	..	..	..	..		..	..	..	..	..	..	..	..	6 26
3 17	28 48	..	..	..	..		..	..	..	..	..	..	..	..	25 31
2 5	24 51	..	..	..	..		..	..	..	..	..	..	..	..	22 46
..	19 44	19 44	Prelim.	..	..		..	..	..	..	..	..	..	..	..
3 7	33 67	..	..	..	..		..	..	..	..	..	..	..	..	30 60
1 53	13 11	..	..	..	..		..	..	..	..	..	..	..	..	11 38
2 65	25 5	..	..	..	..		..	..	..	..	..	..	..	..	22 20

olumns 11 to 44 of tables of lengths of lines in Public Works Statement 1904–10.

APPENDIX F.

ANNUAL REPORT ON BUILDINGS BY THE GOVERNMENT ARCHITECT.

The Government Architect to the Hon. the Minister of Public Works.

Sir,— Public Works Office, Wellington, 1st July, 1913.

I have the honour to submit the following report on the various building-works throughout the Dominion carried out by the Department during the year ended 30th June last:—

New Parliament Buildings.

The foundations and basement have been completed. The conduit in Sydney Street was finished during the year. Bowen Street has been widened, and similar work in Museum Street is in progress. The brick walls up to ground-level, and granite facing of basement walls on Museum Street, are practically finished, all the stone required being on the ground. Owing to bad ground met with in the line of the old gully in Sydney Street some of the foundation-work was carried to a depth considerably greater than was anticipated. In the conduit along the closed portion of Sydney Street, sewer-pipes, storm-water pipes, and gas-pipes have been laid, and provision made for connecting up electric power, lighting, and telephone cables, also water-supply, without breaking up the surface of the grounds.

The rearrangement of the grounds is practically completed, and ornamental boundary-walls have been built. Most of the work following on the widening of Molesworth and Charlotte Streets has been completed, only a little kerbing and wood-blocking remaining to be done. A large amount of taking up and replacing of gas, water, and drainage pipes, also foundations of destroyed buildings, was involved by the rearrangement of the grounds. An old iron building standing on Sydney Street, and the Parliamentary destructor, have been removed to new sites.

Complete plans and specifications for the first portion of the proposed new building, with detailed schedules of quantities, have been prepared, and tenders invited for the erection of the building.

General.

Awanui Wireless Station.—The erection of the station masts, engine-shed, store, and officers' quarters was completed during the year. A satisfactory water-supply was provided from two deep boreholes.

Departmental Buildings, Auckland.—The May-Oatway fire-alarm system has been installed, and minor repair works attended to from time to time.

Artillery Stables, Takapuna.—A building of steel and timber framing is in course of erection under contract.

Departmental Buildings, Hamilton.—The contract for the erection of these was completed, and the offices are now occupied.

Artillery Stables, Hamilton.—The site near Frankton Junction has been levelled, and building operations under contract are in progress.

Huntly Drill-shed.—A wooden building is being erected under contract.

Paeroa Defence Buildings.—Regimental offices and equipment-store were erected by contract.

Gisborne Departmental Buildings.—Tenders are being invited for the erection of new buildings in brick.

Morere Bathhouses.—Erected and equipped by day labour.

Artillery Stables, Napier.—Erection of buildings under contract has commenced.

New Plymouth Deeds Office.—A brick building was completed and occupied in March last.

Stratford Departmental Buildings.—The erection of a two-story building in wood from plans prepared by Mr. E. M. Blake, F.R.I.B.A., is approaching completion.

Stock Inspector's Residence, Opunake.—A wooden building is in course of erection.

Government Insurance Offices, Wanganui.—A new brick building was completed and opened in April.

State Coal Depot, Wanganui.—Additions are in progress.

Government House, Wellington.—New stables and garage have been erected, and an old building adapted for use as a coachman's cottage.

Departmental Buildings, Wellington.—The two stacks of old strong-rooms at either end of these buildings have been strengthened by the addition of 9 in. of brickwork around each side, and the fixing of additional fireproof doors. The usual minor repairs have been attended to during the year.

Postal Bulk Store, Wellington.—The erection of this building under contract is approaching completion. Tenders for the installation of the cranes and elevators have been received.

Government Printing Office.—A contract has been let for an addition in brick, and many minor works have been carried out by the Public Works staff.

Public Works Store, Pipitea.—Tenders are being invited for the erection of a new store. A residence for the Storekeeper is practically completed.

Dominion Museum.—A temporary building of iron has been erected for the accommodation of Maori exhibits.

Artillery Barracks, Nelson.—The erection of the buildings under contract was begun.

Public Trust Office, Greymouth.—A brick building was erected by contract.

Hokitika Departmental Buildings.—A substantial extension in brick is approaching completion.

Departmental Buildings, Christchurch.—This fine building, designed by Mr. J. C. Maddison F.R.I.B.A., is approaching completion under contract. Contracts have been let for installing fire-alarms, electric light, and electric clocks.

Mount Cook Hostel.—The new building of concrete is still in course of erection, and is now well advanced. Most of the work has been done by day labour.

Artillery Stables, Christchurch.—The erection of stables and quarters is in hand under contract.

Awarua Wireless Station.—The erection of buildings, masts, and anchorages was completed during the year. Two cottages were erected under contract.

HOSPITALS.

Avondale Mental Hospital.—A contract has been let for the erection of No. 2 auxiliary building, and the contractor has the work in hand. Plans for the proposed No. 3 auxiliary building are ready for the invitation of tenders.

Tokanui Mental Hospital.—The erection of the first large block of buildings was completed in February last. A boiler-house and workshop are now being built by day labour, and boilers are being installed. Three more attendants' cottages have been built.

Rotorua Cottage Hospital.—The building was completed.

Rotorua Infectious-diseases Hospital.—The building was completed during the year.

Porirua Mental Hospital.—Additions to auxiliary buildings were completed in February last.

Waitati Mental Hospital.—New buildings commenced in February, 1912, were completed by day labour.

St. Helens Hospital, Dunedin.—An isolation ward in brick was completed in September.

POST-OFFICES.

Kawakawa.—A wooden building was erected by day labour, there being but little competition for building contracts in this district.

Kaikohe.—A wooden building was erected by day labour.

Kaitaia.—A wooden building is approaching completion, also by day labour.

Russell.—Substantial additions were made during the year.

Mangapai.—Additions to the office were carried out by day labour.

Whangaroa.—Additions were made during the year.

Rawene.—Tenders for additions were under consideration at the end of the year.

Paparoa.—Additions and alterations are in progress by day labour.

Auckland Chief Post-office.—The new brick-and-stone building in Lower Queen Street, which was approaching completion at the end of last year, was finished and occupied by the Postal Department early in the current year. Two passenger-elevators and one goods-lift installed; a pneumatic despatch-tube system fitted; lighting and furnishing completed.

Auckland Old Post-office.—The building has been partitioned and rearranged; part of it has been let.

Ponsonby.—A two-story brick building with clock-tower was completed under contract.

Otahuhu.—Additions in brick and the conversion of some residential rooms into offices were completed during the year.

Papakura.—A new wooden building was erected under contract during the year.

Shortland.—A building was purchased and adapted for use as a post-office.

Te Awamutu.—A brick clock-tower was added to the building erected last year, and gas and drainage services installed.

Tuakau.—A contract has been let for the erection of a wooden building, including quarters.

Ohaupo.—A contract for the erection of a two-story building in wood was let in June.

Waihou.—A wooden building with quarters has been erected under contract.

Te Puke.—Additions and alterations were carried out.

Rotorua.—Tenders have been invited for the erection of a handsome new office on the present site.

Tokomaru Bay.—Additions were carried out by day labour.

Opotiki.—The new office was completed under contract and fitted up.

Taradale.—One room and a telephone exchange have been added.

Otane.—A wooden building was completed under contract.

Awakino.—A new building in wood was completed in March last.

Taumarunui.—Additional accommodation has been provided.

Ohura.—A wooden building has been erected.

Tokaanu.—A wooden building is approaching completion.

Whangamomona.—A wooden building was completed in February last.

Taihape.—Tenders are in for additions and alterations.

Eketahuna.—Additions and renovations have been completed.

Masterton.—Alterations and improvements have been effected.

Palmerston North.—Alterations and renovations have been carried out.

Petone.—Additions in brick are approaching completion.

Pongaroa.—Additions and alterations were completed early in the year.

Kaiwarawara.—A new brick building was erected under contract.

General Post Office, Wellington.—The new building was occupied and formally opened on the 26th November last. Electrical fittings, power and vacuum cleaning plants, and water-services have since been installed. Alterations to the old Post-office premises, included in the contract for the new building, have been duly carried out.

Canvastown.—A small building was erected.

Murchison.—A new building was erected under contract.

Nelson.—Additions and repairs were carried out.

Takaka.—A Postmaster's residence was erected.

Westport.—Earthquake-damages to the new building were repaired. The old office was converted for use by other Government Departments.

Millerton.—Extensive alterations and additions were carried out.

Christchurch.—A petrol-store has been built, fire-alarm and water-service installed.

Sydenham.—A two-story building in brick and stone has been completed.

Temuka.—A contract has been let for additions to building.

Fairlie.—Additions and alterations have been carried out.

Dunedin.—Automatic fire-alarms have been installed.

Ravensbourne.—A new building in brick was completed in March last.

Mosgiel.—A contract has been let for additions in brick.

Hawea Flat.—A bathroom, lobby, and other additions were made to the new building.

Roxburgh.—The erection of a new office in wood is still in hand under contract.

Gore.—This brick building partly destroyed by fire has been restored.

Balfour.—A new office of wood has been erected.

COURTHOUSES.

Kaikohe.—A Courthouse was erected under contract and is now in use.

Kaitaia.—A building has been erected by day labour, no satisfactory tender having been received.

Hikurangi.—Plans for substantial additions have been prepared.

Magistrates' Court, Auckland.—The contract for the erection of a two-story brick building with Oamaru stone facings was completed in June last. The old Courthouse will be fitted up for offices, and tenders are being invited for a caretaker's cottage in brick.

Otorohanga.—A wooden building was erected under contract.

Ohakune.—A new building was completed early in the year.

Masterton.—The new building was furnished and the old building repaired.

Takaka.—A new building in wood was completed.

Greymouth.—A brick building was completed under contract in December last.

Methven.—A new building of wood has been erected.

Amberley.—The existing building has been removed and re-erected on another site.

Oamaru.—Extensive repairs were completed in December.

Dunedin.—Automatic fire-alarms have been installed.

POLICE-STATIONS.

Maungaturoto.—A station, with stable and outbuildings, was erected by day labour.

Waipu.—The contract let last year for the erection of a station was duly completed.

Onehunga.—A new brick lock-up has been erected and repairs carried out.

Howick.—Old cells were converted into a stable and new lock-up provided.

Papakura.—A contract was let for the erection of a station residence, and removal and re-erection of existing lock-up and outbuildings.

Pukekohe.—A new lock-up was built and repairs carried out.

Huntly.—A contract was let for the erection of residence, office, stable, and lock-up.

Otorohanga.—A new station was erected under contract and stable removed.

Waihi.—Extensive additions were completed in February last.

Gisborne.—A new building in brick was completed under contract and fitted up. The old buildings were repaired and altered.

Tokaanu.—Tenders are being invited for a building in wood.

Taumarunui.—A new station was completed in August of last year.

Hastings.—A sergeant's residence was erected under contract.

Porangahau.—A new station has been erected under contract.

Masterton.—A contract was let in April last for the erection of a station and residence.

Kilbirnie.—A building has been purchased and adapted for use as a police-station.

Wakefield.—A new station and lock-up were completed.

Murchison.—A building of wood was erected under contract.

Cobden.—A new station and lock-up have been completed.

Islington.—A constable's residence has been erected.

Ashburton.—Offices and quarters, also sergaent's residence, have been erected.

Tapanui.—A new station in wood is being erected.

Mataura.—A new station is being erected under contract.

PRISONS.

Mount Eden Prison.—The erection of the south wing by prison labour was completed, and some old buildings on the site removed. A new stone boundary-wall is now in hand.

Invercargill Prison.—The extension of warders' and hospital quarters was completed during the year.

The foregoing report mentions only new works of some importance, and alterations and additions of a more or less extensive character. A large number of minor works, consisting of new buildings, additions, and alterations, have also been carried out, principally under petty contracts, and the ordinary maintenance, repair, and repainting of buildings owned by the Government throughout the Dominion have been attended to as usual.

I have, &c.,
JOHN CAMPBELL, F.R.I.B.A.,
Government Architect.

The Hon. the Minister of Public Works.

APPENDIX G.

ANNUAL REPORT ON ELECTRICAL WORK AND POWER SUPPLY UNDERTAKINGS BY THE ELECTRICAL ENGINEER.

The Electrical Engineer to the Hon. Minister of Public Works.

Sir,— Public Works Department, Wellington, 15th September, 1913.

I have the honour to submit the following report on the various works entrusted to me during the past year:—

Lake Coleridge Power Works.

The works are designed to utilize the head of water or energy due to the difference in level between the surface of Lake Coleridge—viz., 1,667 ft.—and the Rakaia River—viz., 1,173 ft.—a difference of 494 ft.

The works now under construction provide for headworks and buildings for supplying 10,000 h.p., whilst the plant now on order consists of three turbine generator sets, each of 2,000 h.p. capacity, making a total of 6,000 h.p., of which two units giving 4,000 h.p. will be available for supply purposes, leaving the third unit as spare. Transforming plant is being provided in duplicate for transforming up from 6,600 volts to 66,000 volts pressure, suitable for transmission throughout the Canterbury Province. The transmission-lines between Coleridge and Christchurch will also be in duplicate, and erected for the most part along separate routes, thus providing for the greatest possible immunity from interruptions due to atmospheric influences. A substation building is being erected in Addington, which will contain the transforming plant, which is also in duplicate. This plant is designed for transforming the pressure from 66,000 volts, at which the current will be transmitted from Coleridge, to 11,000 volts, suitable for distribution to Christchurch and for a radius of twenty miles from Addington. It is proposed further to provide a stand-by plant in this substation, consisting of oil-engines driving three-phase generators, which will enable the supply to be partly maintained in the event of failure of the transmission-line or generating plant.

A list of contracts entered into for plant and works is shown in Table No. 1 annexed hereto—a total of forty-two contracts, amounting to £167,686.

In addition to the above contracts the Department is carrying out by direct labour or co-operative contracts the following works:—

Inlet works for establishing communication between the tunnel and the lake.
Outlet works for connecting the tunnel to the pipe lines.
Foundation to pipe lines.
Excavating for power-house foundations.
Excavations for tail-race.
Maintenance of roads between Coalgate and headworks.
Transportation and erection of plant.

Reviewing the works as they now stand—first, as regards the tunnel, a shaft was driven from the surface approximately midway between the two ends, and the work of excavating the tunnel was carried out from the two outer faces inwards, and from the two inner faces outwards. The tunnel was driven through between the centre shaft and the outlet end on the 24th July, and the work of lining this portion is being proceeded with. The work of excavating the other portion of the tunnel between the centre shaft and the lake has been slower, as part of the excavation is in rock and 15 chains of tunnel remains to be excavated, which should be completed in ten weeks' time. It is estimated that the whole of the tunnel will be completed by the end of March.

The pipe-line contract is in a very unsatisfactory state, and the contractors will require to double their rate of progress in order to complete in time to enable the Department to fulfil its obligations. Strenuous efforts are being made to expedite this portion of the work.

The power-house buildings are also very much behind, and considerable improvement must be made with this work also. The substation buildings are approaching completion.

With regard to the plant, two of the turbines and the whole of the transformers have already arrived in the Dominion; the remaining turbine and generators, together with switch gear, will be shipped very shortly, and it is anticipated that the whole of the plant will be delivered by the end of December, when the work of erection will be vigorously proceeded with.

With regard to the transmission-line, the conductors, the insulators, and other accessories have arrived, also 1,000 out of 1,750 poles—sufficient, in fact, to complete one transmission-line—and a contract has been placed for carting and erecting the poles and insulators.

The underground cables for connecting the substation in Addington to the municipal electricity works of Christchurch have come to hand, and arrangements are being made for laying the same.

A quantity of material for serving the districts surrounding Christchurch has arrived, and will be erected when more definite arrangements for the supply of power to these districts have been made.

The maintenance of the roads between Coalgate and Coleridge is costing a good deal more than anticipated: some £4,500 has already been spent, and £1,500 more will be required. The excess is mainly due to the presence of a belt of trees along part of the route which keeps the road from drying; the road was in a bad state for this reason when we took it over, and we have not been able to restore it to the extent of enabling traffic to be maintained in wet weather as well as in dry weather.

The problem of transportation is a serious one, as we require to transport 95 tons of coal and cement per week—practically ten traction-engine loads—without interruption; in addition to this we require to transport the machinery, and the road has to be kept open for the power-house contractor, the pipe-line contractor, and the transmission-line.

The Department is under contract to supply Christchurch by the 1st May, 1914, and as far as I can see there is reasonable prospect of acting up to our obligation. The critical elements at present are the pipe-line contract, delivery of machinery in good time, and the transportation of material from Coalgate to Coleridge.

With regard to the cost of construction, a statement of the payments made to the end of July, the liabilities and estimate for completion against the several sections of the work, is shown in Table II herewith. The total expended is £82,897; the total liability is £121,236; estimate to complete, £48,484; total, £252,617.

The original estimate for the completion of the works corresponding to the stage now under construction was £251,214, showing an excess of £1,403. The estimate to complete, however, includes contingency items which may or may not eventuate. At any rate, the works will be completed substantially in accordance with the original estimate.

A contract has been entered into with the Christchurch City Council in the following terms:—

1. Supply shall be given in the form of three-phase current having a periodicity of 50 cycles per second at a pressure on 11,000 volts.

2. Power shall be delivered to the City Council at three points, viz.:—

(1.) The present generating-station at the destructor at Christchurch.

(2.) A building situate in the Council's yard at the corner of Montreal Street and Moorhouse Avenue, or such other point as may be agreed upon.

(3.) A building situate within the city area at a point to be determined.

The Council shall pay the Department for the supply at the rate of £8 13s. 4d. per annum per kilowatt for 300 kilowatts, and £5 per kilowatt per annum for every kilowatt demanded by the Council in excess of 300.

4. The maximum demand shall be deemed to be the maximum output required at any one time during the year, averaged over half an hour, from the Department's substation to the Corporation's substations, as measured at the Department's substation by a meter to be provided by the Government.

5. The loss in the mains at maximum load between the Department's substation and the Corporation's substation shall not exceed 2½ per cent. Should the loss exceed 2½ per cent. a proportionate reduction in charge shall be made by the Department.

6. Payments shall be made quarterly, and shall be one-fourth the amount of yearly payment based upon the maximum observed during the last four quarters, including that for which payment is being made.

7. During the first year of operation and until the maximum for the year is ascertained payments are to be made quarterly on the basis of the maximum observed in the interval between the date upon which supply commences and the date upon which payment becomes due; any difference between the sums paid and the total amount due to the Department on the basis of the yearly maximum shall be adjusted at the end of the first year.

8. The Council agrees to take a minimum supply of 500 kilowatts.

9. The Department will guarantee to supply 4,500 kilowatts if and when required by the Council after twelve months' notice.

10. The Department agrees to commence to supply and the Council agrees to take a supply of not less than 500 kilowatts not later than the 1st May, 1914.

11. The scale of prices agreed upon is to remain in force for five years from the date of commencing the supply. At the end of the said five years the contract shall be renewed for a further term, and at such prices and for such period as may be agreed upon.

12. The Council agrees not to charge power-consumers more than £10 per annum per kilowatt of maximum demand provided that the maximum demand is not less than 30 kilowatts, and £12 per annum per kilowatt if the demand is less than 30 kilowatts.

13. The Department undertakes not to supply any consumer within the city boundaries other than the City Council, the Tramway Board, Drainage Board, other local bodies, and the Railway and Government Departments: Provided that any consumer other than the City Council supplied under this clause shall be prohibited from retailing energy.

The substance of the agreement is that the Council have agreed to take a supply from the Department and to pay £8 13s. 4d. per kilowatt per annum of maximum demand for the first 300 kilowatts of power, and £5 per kilowatt per annum for every kilowatt in excess of this.

Before entering into the agreement the Council engaged Mr. Frederick Black, M.I.E.E., consulting enigneer, of Wellington, to report on the comparative cost of taking a supply from the Department and of generating electricity by gas, steam, or oil engines, and to estimate the cost of the necessary transforming plant and of reticulating the city. Mr. Black's investigation was exhaustive, his conclusions final, and his recommendations unequivocal for the conditions of load obtaining in Christchurch.

Mr. Black made a comparison at two stages in the growth of the business—viz., 2,090 kw. and 3,250 kw., corresponding to 2,801 h.p. and 4,360 h.p. respectively, anticipated in 1916 and 1919—that is, two years and five years after the supply is first commenced. The comparison is as follows:—

	Year of Operation.	
	1916.	1919.
Maximum power required (kilowatts)	2.090	3,250
,, (horse-power)	2,801	4,360
Total annual cost—	£	£
Lake Coleridge	12,585	19,190
Gas plant	18,170	23,100
Steam plant	20,383	26,700
Oil plant	29,414	38,015
Cost per kw. per annum—		
Lake Coleridge	6·02	5·91
Gas plant	8·70	7·11
Steam plant	9·75	8·22
Oil plant	14·05	11·70
Cost per h.p. per annum—		
Lake Coleridge	4·47	4·40
Gas plant	6·48	5·30
Steam plant	7·27	6·12
Oil plant	10·48	8·72

Mr. Black concludes by stating, "It is plain from this investigation that the Government's terms for a bulk supply are so low that the Council could not possibly generate the same amount of energy under the same conditions of demand, in any type of fuel-using station, at a cost that would make the choice of source a matter of any hesitation."

The qualification made by Mr. Black as to conditions of demand should be borne in mind, as it suggests that under other conditions the relative positions may be altered.

It should also be noted that the Department's terms were only accepted after exhaustive inquiry and proof that there was a substantial advantage in accepting them. Mr. Black, in his report, raised the question of a stand-by plant, and insisted in its necessity in the case of long transmission-lines, though in the case of the Waipori plant most of the interruptions experienced have been due to failure of the wooden fluming at the headworks.

Every precaution has been taken by the Department against failure in the works now under construction. The pipe-line is in duplicate; there is ample margin of spare plant; the transmission-line is in duplicate, carried on separate poles, and erected for the most part along separate routes; the plant in the main substation, and also the cables between the substation and the Council's works, are in duplicate; and the water storage is sufficient to maintain a supply of 10,000 h.p. continuously for 200 days without any inflow whatsoever.

It has generally been recognized that a local stand-by plant is desirable in case of long transmission-lines: the difficulty has hitherto been that no previously existing form of fuel plant could be considered satisfactory for this purpose. A steam plant to be of any use as stand-by must be kept under steam, involving attendance, fuel-consumption, and as much repairs and depreciation as if in full operation, and the same applies, though to a less extent, to a gas-engine plant. We have now, however, the benefit of a new invention—viz., the oil-engine—which is admirably adapted as a stand-by plant: it consumes no fuel when not at work, and it can be started up in a few minutes. It is true that the cost of oil renders the comparison with steam or gas unfavourable for long continuous service, but this disability does not apply when the plant is used for stand-by purposes.

The principle of employing oil-engines as auxiliaries in conjunction with water-power plant as a cheap method of supplying intermittent demands in excess of the capacity of the water-power plant has been adopted by the Department; the plant so provided can be utilized for stand-by purposes.

Negotiations are now proceeding with the Christchurch Tramway Board on the same basis of price as the City Council, but the conditions are very different, because the Board is equipped with an up-to-date steam plant, capable of supplying their whole requirements for a long time to come, consequently the margin or balance of advantage in favour of the bulk supply from Lake Coleridge is less, because interest and sinking fund have to be paid on the existing investment in plant and buildings; nevertheless it is hoped that mutually satisfactory arrangements may be arrived at.

There is an insistent demand for power from local authorities and power-users outside the limits of Christchurch, which we hope to satisfy in the course of the first year of operation, after which the duty of supplying power to other districts in the Canterbury Province will be entered into.

A supply to the Government workshops at Addington is also under consideration, when it is hoped that it will be used not only for running the workshop tools but also for steel-making or steel-refining

It has been evident during the progress of the works now in course of construction that successful results could only be obtained by placing the works in sole charge of an engineer who would devote his whole time to organizing the work with a view to economy and rapid completion of the same. Mr. Lawrence Birks, B.Sc., A.M.I.C.E., M.I.E.E., has now been appointed to this position. He will also carry out the duties pertaining to the local management of the undertaking as a business concern.

ELECTRIC LIGHT AND POWER LICENSES.

Licenses under the Public Works Act have been issued to the following local authorities and companies: Opotiki Borough Council, Hastings Borough Council, Napier Borough Council (amending regulations), Wellington Steam Ferry Company, Wairoa Borough Council, Mataura Borough Council (extensions), Acetone Illuminating and Welding Company, Thames Borough Council, Ngaruawahia Town Board, Hastings Borough Council (amending regulations), Silver

Stream Mines Company (Limited), Christchurch Tramway Board, Invercargill Borough Council, Te Kuiti Borough Council, and Eketahuna Borough Council.

The following are under consideration: Christchurch City Council, New Plymouth Borough Council (extension), Dunedin City Council; Charles Blake, of Waikare; Cashmere Hills-Christchurch Tramway Board; Devonport Borough Council; Todd Brothers, of Heriot; Mr. Nicol, of Waimate.

Water-power licenses have been issued to the following: Mangaweka Town Board; Robert Ellis, of Brightwater, for supply to Richmond and Brightwater; and the Dominion Portland Cement Company.

In connection with the issue of licenses the Department supervises the work during construction and inspects after completion. The Department is also the authority to whom disputes are referred as regards the accuracy of wattmeters, voltmeters, and ammeters, or any other matters in dispute between the supply authority and the consumer. For this purpose it is necessary to maintain standard instruments for testing purposes, and a set of standards has been procured which constitute the standards of electrical measurement for the Dominion.

I have, &c.,
E. PARRY,
Electrical Engineer.

The Hon. the Minister of Public Works.

LAKE COLERIDGE ELECTRIC POWER PLANT.—CONTRACTS PLACED.

12th September, 1913.

Table I.

Section.	Work.	Particulars.	Contract Sum.		
			£	s.	d.
1	Tunnel	Length, 110 chains, area, 50 sq. ft.	53.172	0	0
3	Pipe-lines	Two pipe-lines, 54 in. diameter, each 36 chains long	17,623	13	6
3A	Valves and expansion-joints	Two 42 in., six 15 in., and two 6 in. valves; four 52 in. expansion-joints	837	0	0
4	Water-wheels and accessories	Three turbines, 2,150 b.h.p., 500 r.p.m.; one Pelton wheel, 2,150 b.h.p, 500 r.p.m.	1,195	0	0
5	Generators, &c.	Three generators, 1,500 kw., 6,600 volts, 500 r.p.m.; one 150 kw. exciter; one 150 kw. motor generator	5,561	0	0
6	Switchboard, switches, &c.	For three generators and two transformer groups, each 4,500 kw.	4.746	0	0
7	Transformers	Six step-up transformers, 6,600 to 66,000 volts; six step-down transformers, 66,000 to 6,600 volts	9,673	0	0
8	Lightning-arresters	Electrolytic type: six 66,000 volts, two 6,600 volts, six 11,000 volts	2,588	0	0
9	Transmission-line insulators	6,000 insulators, 6,000 insulator-pins	3,795	0	0
10C	Ironbark piles	1,200 at £3 10s., 550 at £3 10s. each	6,125	0	0
10D	Wooden poles for distribution	500 mixed hardwoods, £2 2s. each	1,050	0	0
11	Bare conductors	130 miles 7/14, 60 miles 7/12, 420 miles 7/0·135 aluminium wire	13,100	15	9
12	Insulated cables	14,080 yards ·050 three-core cable, at £459 per mile	3,765	1	0
13	Insulators for distribution system	8,000 pin insulators at 1s. 3¼d.; 8,000 galvanized iron pins at 4·802d.	668	0	6
14	Distributing line-switches	200 kw., 10 amps., five switches	82	0	0
15	Testing transformers	One transformer, three l.t. terminals; one transformer, two l.t. terminals; two voltmeters	525	0	0
16	Meters	..	291	15	6
17	Power-house building	Length, 184 ft.; breadth, 73 ft.; height, 40 ft. (to basement)	15,635	2	6
18	Substation building	Length, 83 ft.; breadth, 50 ft.; height, 32 ft. 6 in.	3,098	1	9
19	Travelling crane	For power-house; lift, 20 tons, span, 32 ft. 6 in.	646	0	0
20	Staff cottages	Two cottages, design No. 17; two, design No. 8; two, design No. 11; one, design No. 13; one, design No. 5	2,846	19	1
20A	Wiring cottages	..	139	0	0
21	Batteries and accessories	Fifty-six cells Tudor J8 1–15 h.p. motor booster; fifty-six cells Tudor J5; 1–7½ h.p. motor generator	839	12	0
22	Bitumen	150 tons	1,087	0	0
23	Motor vehicles	Two lorries, £1,106 4s. 6d.; two cars, £962	2,068	4	6

LAKE COLERIDGE ELECTRIC POWER PLANT.—CONTRACTS PLACED—*continued.*

Table I.—continued.

Section.	Works.	Particulars.	Contract Sum. £	s.	d.
24	Tunnel and penstock gates . .	Four sluice-valves, 60 in. by 40 in., £147 each ; four sluice-valves, 72 in. by 48 in., £187 each	1,336	0	0
25	Telephone insulators	3,000, £106 5s. ; 1,200, £93	199	5	0
26	Workshop tools . .	(J. J. Niven) drill, £161 ; grinder, £32 ; shear-legs, £20 ; pipe tools, £20 : (Chambers and Son) drill, £18 ; lathe, £61 : (Richardson and McCabe) grindstone, £18 ; saw, £15	337	14	0
27	Power-house wiring . .	Number of lights (each), forty-eight, 100 watts ; sixty, 50 watts ; sixty, 25 watts	312	13	2
28	Cable-ducts	Eight miles ducts, eight miles cover-slabs	1,056	0	0
29	Roof-insulators . .	Twenty-six roof-bushings, £448 ; forty busbar supports, £127 5s. ; 100 floor-bushings, £18 11s. Turnbull and Jones, cables, 6,600 volt leads and 11,000 volt leads	724	16	0
30	Cross-arms . .	. .	512	0	0
31	Telephone-wire . .	50 tons, 400 lb. per mile galvanized iron . .	611	5	0
32	Cable-clamps . .	6,000 insulator-clamps	884	0	0
33	Substation crane . .	Span, 26 ft. 4 in., lift, 10 tons	166	0	0
34	Pole-erection . .	Erecting poles, cross-arms, and insulators	4,688	10	10
35	"U" bolts	1,700 bolts with washers and nuts . .	346	0	0
36	Top cross-arms	1,700 1 ft. 6 in. by 5 in. by 4 in. . .	91	8	4
38	Arcing-plates and pole-steps . .	5,000 gal. arcing-plates, £333 6s. 8d. ; 9,600 gal. pole-steps, £180	513	6	8
39	Substation wiring	. .	176	11	6
42	Reactances	Three sets porcelain clad reactance coils . .	930	0	0
43	Dressed poles	200 blackbutt poles for distribution . .	642	10	0
			£167,686	9	7

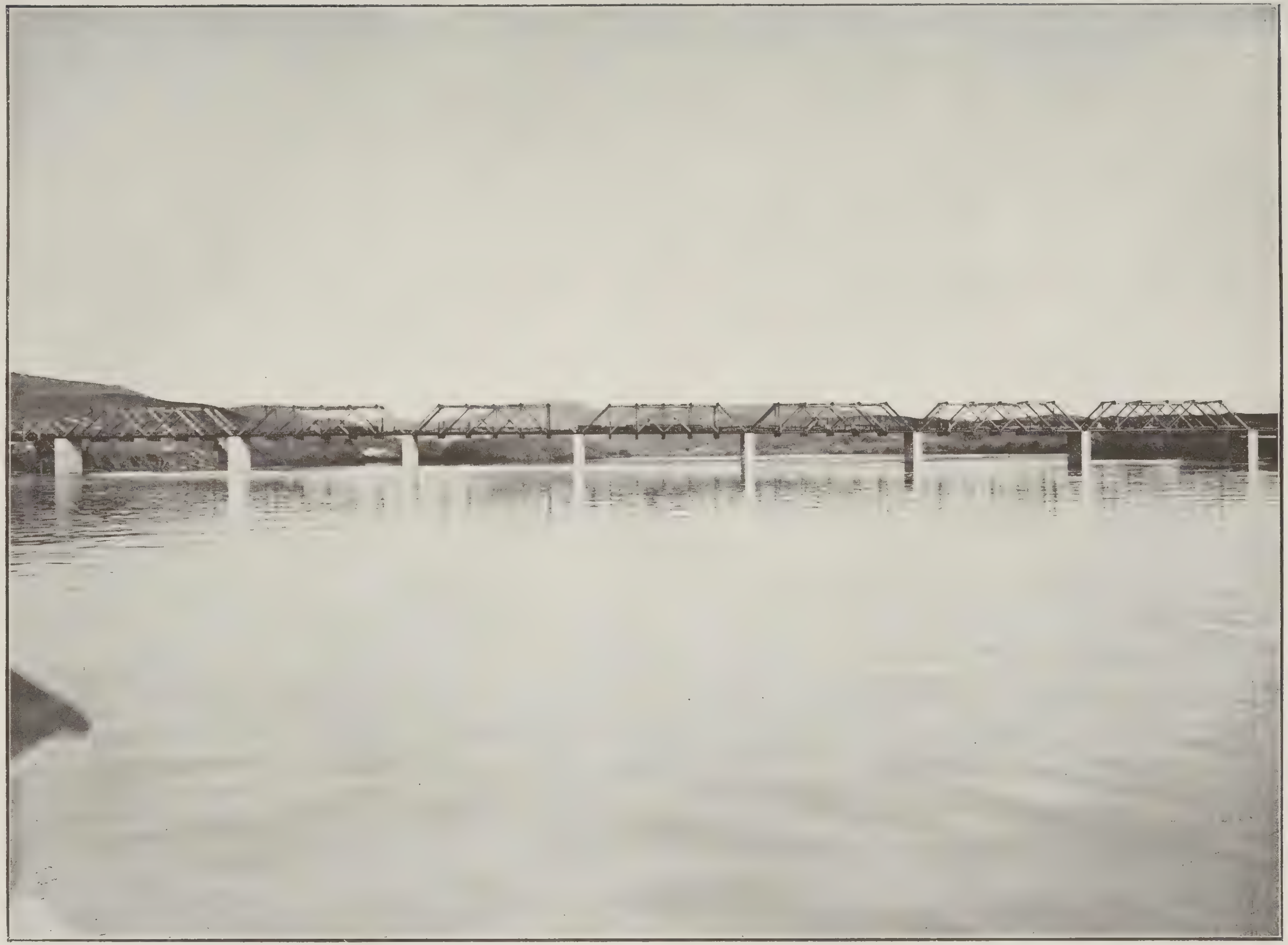
LAKE COLERIDGE WORKS.—STATEMENT OF EXPENDITURE TO DATE, LIABILITY, AND ESTIMATE TO COMPLETE.

12th September, 1913.

Table II.

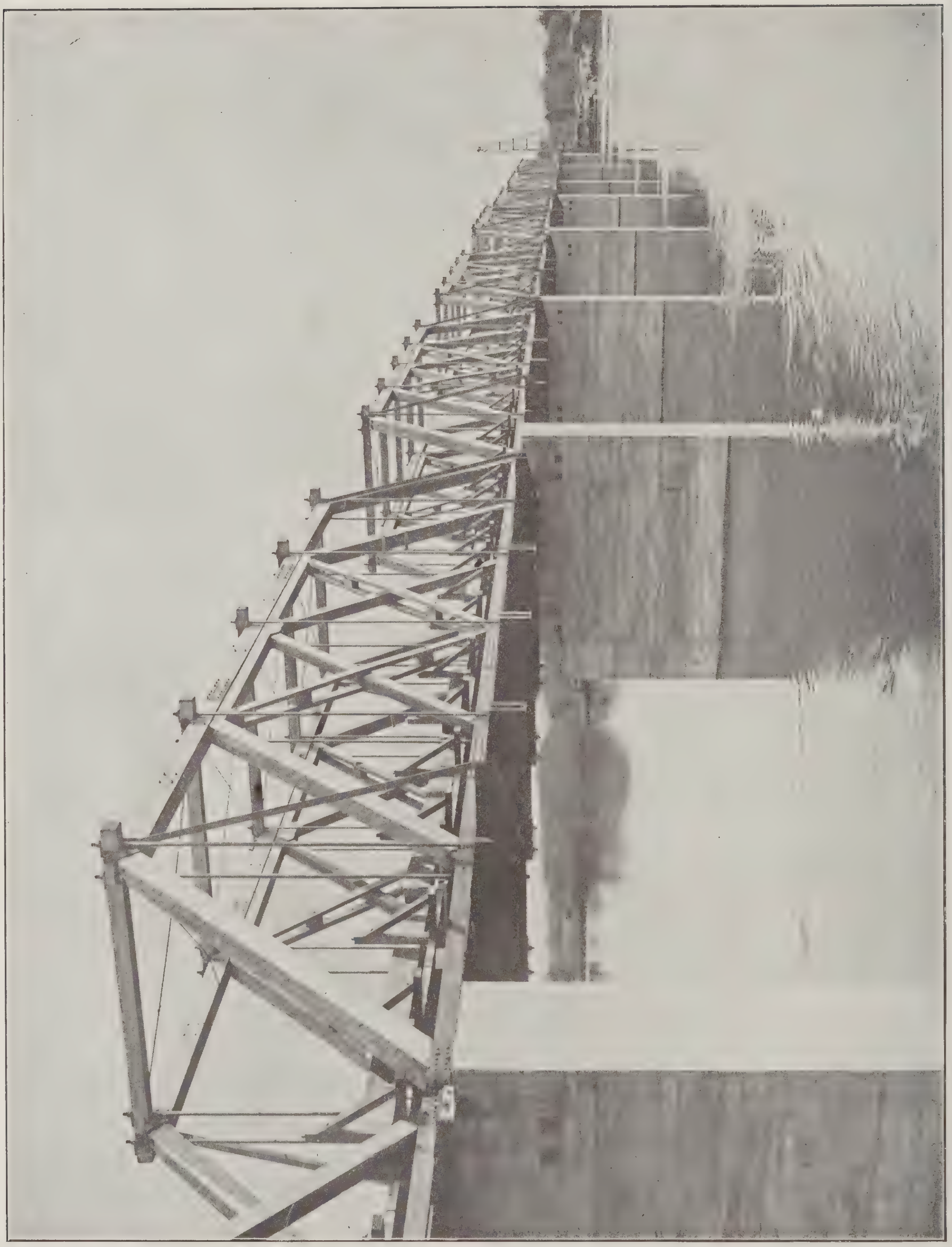
No.	Item.	Expenditure to Date.	Liability.	Estimate to complete.	Total.
		£	£	£	£
1	Land-purchase and compensation	1.185	400	4.562	6.147
2	Road construction and maintenance . .	9.641	. .	3.600	13.241
3	Works at lake outlet	12	. .	40	52
4	Staff village	4.010	139	150	4.299
5	Telephone-lines	1.025	. .	. .	1.025
6	Tunnel with inlet and outlet works	25.695	33.949	4.022	63.666
7	Pipe-line and valves	3.738	17.892	. .	21.630
8	Power-station and buildings	3.770	12.795	1.343	17.908
9	Power plant	5.058	20.097	350	25.505
10	Transmission	6.559	24.295	14.062	44.916
11	Substation building	954	2.144	700	3.798
12	Substation plant	7.972	4.920	2.256	15.148
13	Primary distribution and services	5.796	4.605	14.599	25.000
14	Engineering	7.482	. .	2.800	10.282
		82.897	121,236	48.484	252.617

By Authority : JOHN MACKAY, Government Printer, Wellington.—1913.



HUNTLY–AWAROA ROAD-AND-RAILWAY BRIDGE OVER WAIKATO RIVER.

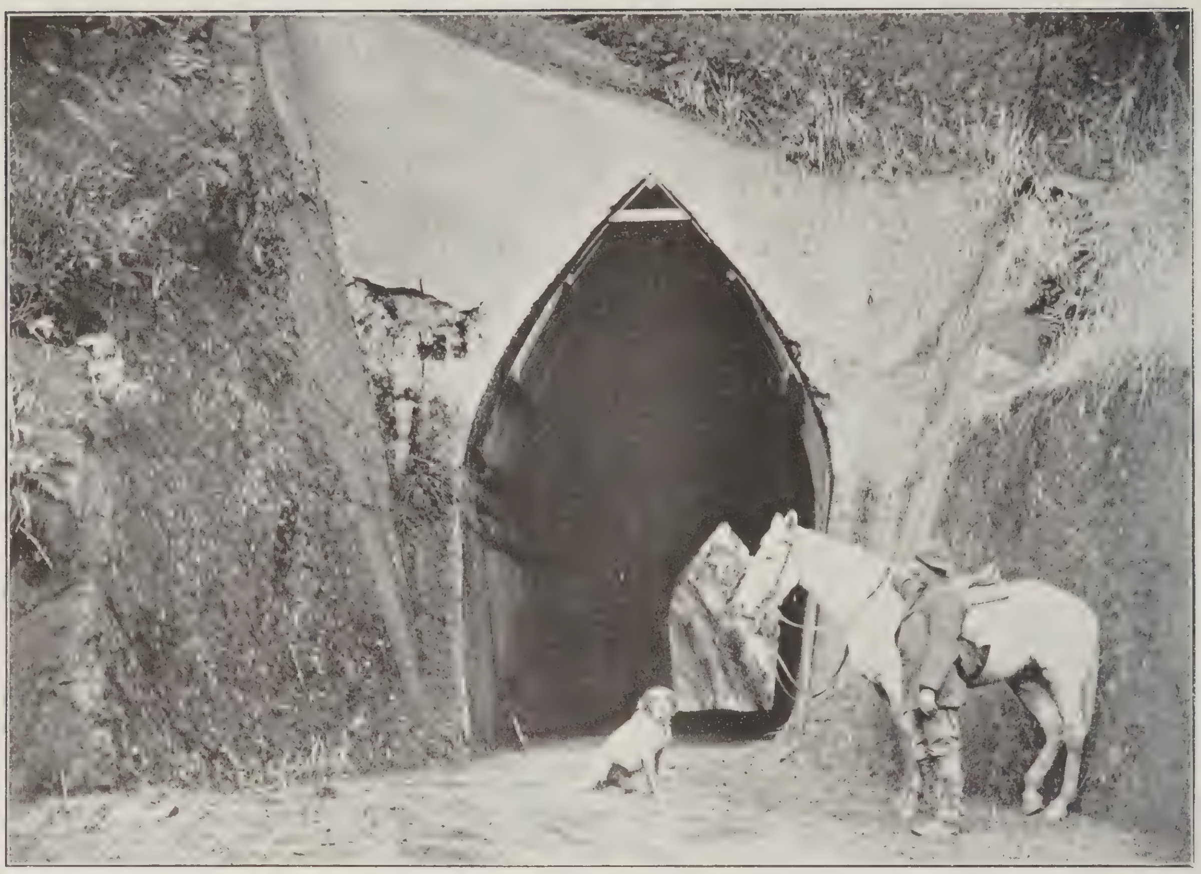
Total length, 904 ft. Width between wheel-guards, 12 ft. Eight spans of 103 ft., two spans of 40 ft. Reinforced-concrete piers and abutments. Superstructure of steel and Australian hardwood.



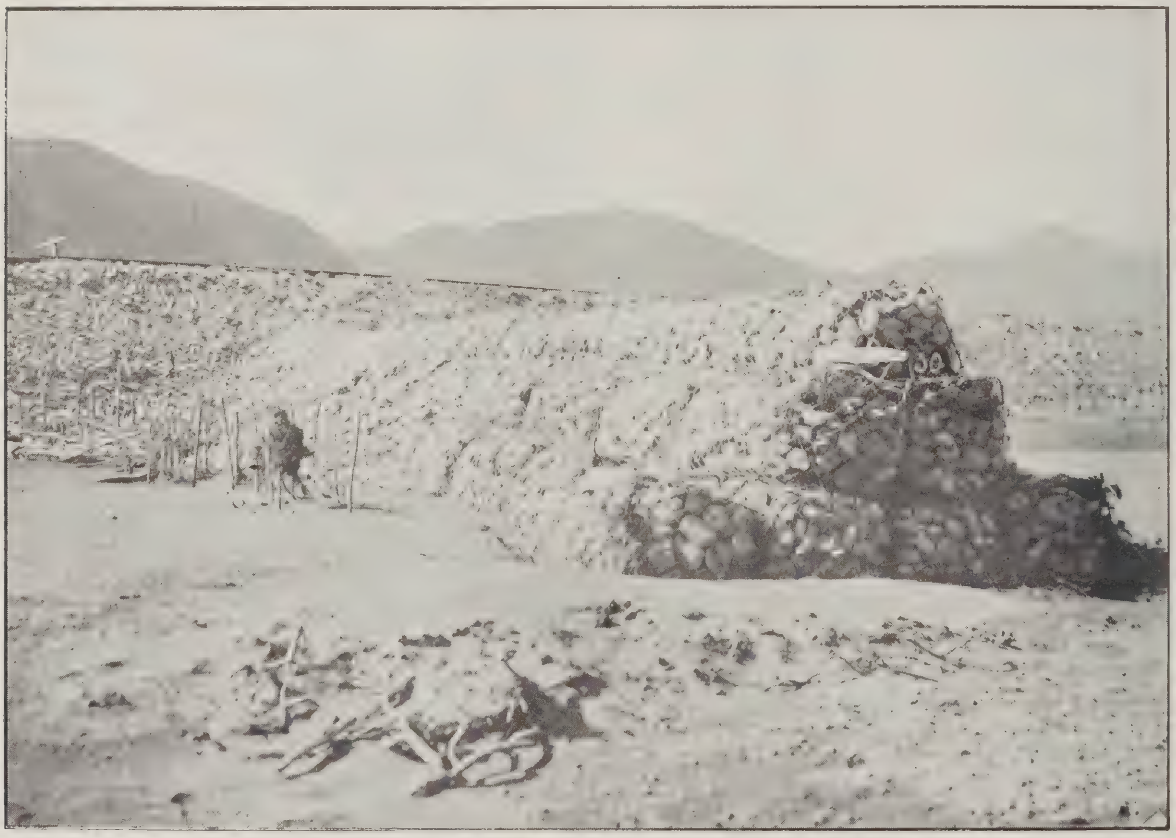
Huntly-Awaroa Road-and-railway Bridge over Waikato River.

Ohura Road, Taranaki.—Bridge in Tangarakau Gorge.

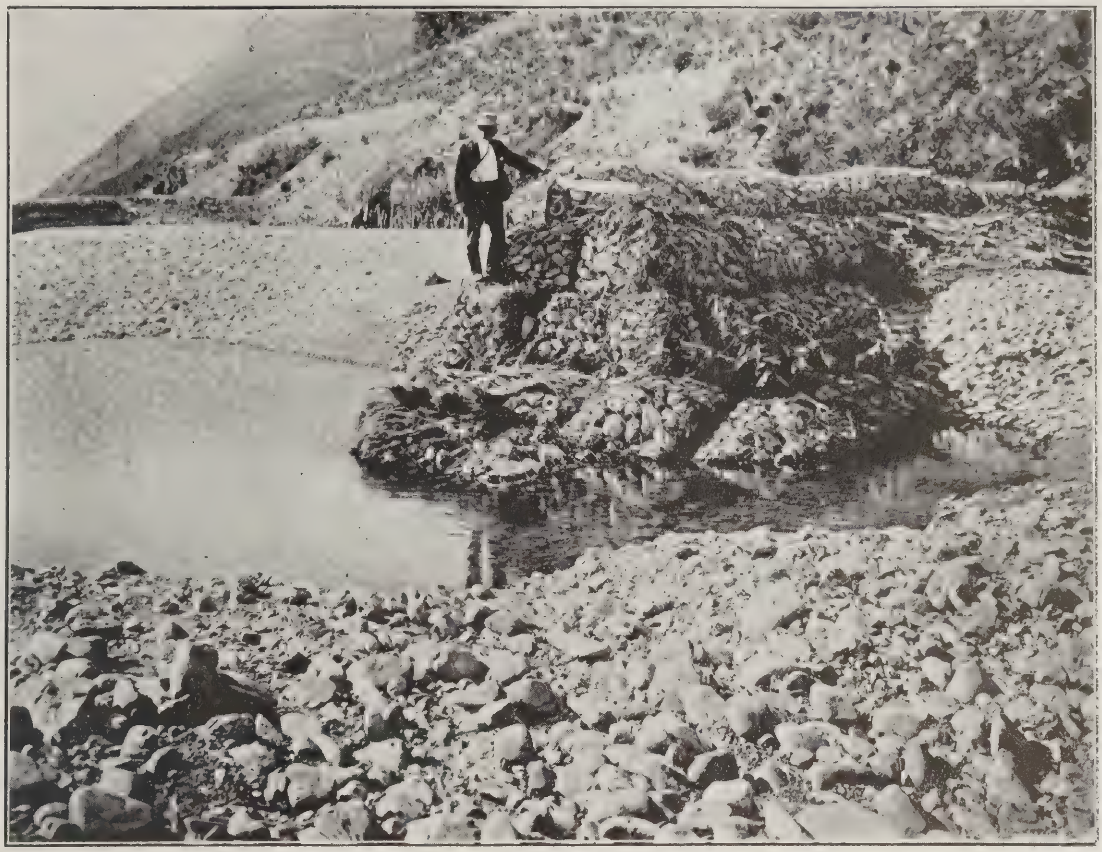
Stratford to Main Trunk Railway.—Bridge over Whangamomona River in Whangamomona Township.



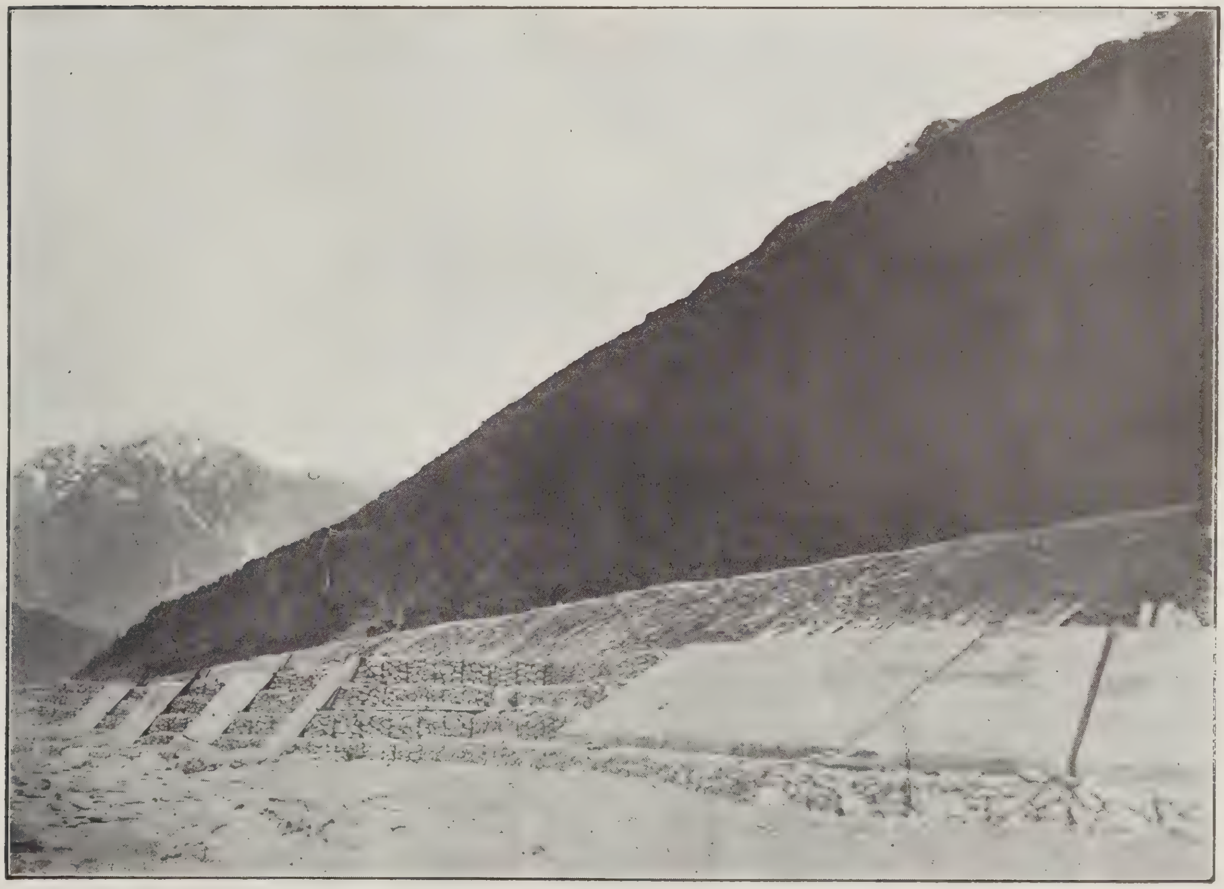
Whangamomona Valley Road, Taranaki.—Tunnel at Arnold.



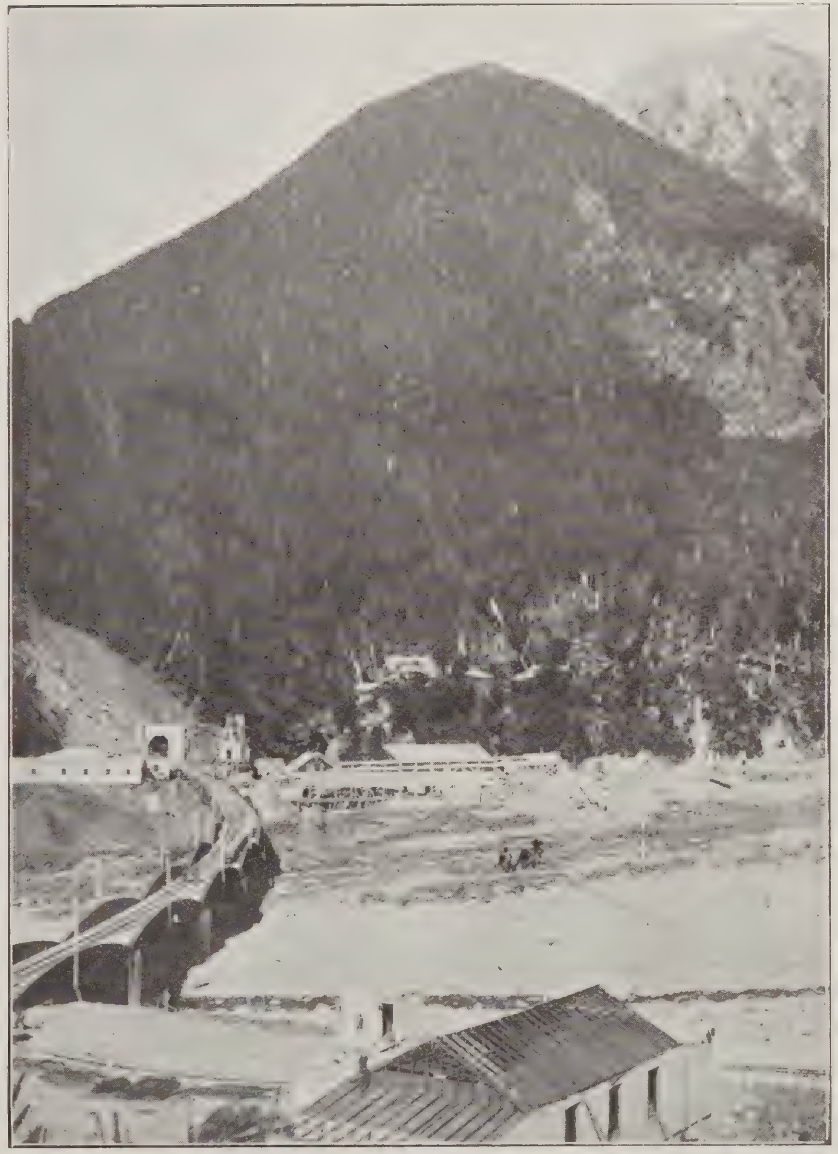
Midland Railway.—Protective Groyne, Waimakariri River.



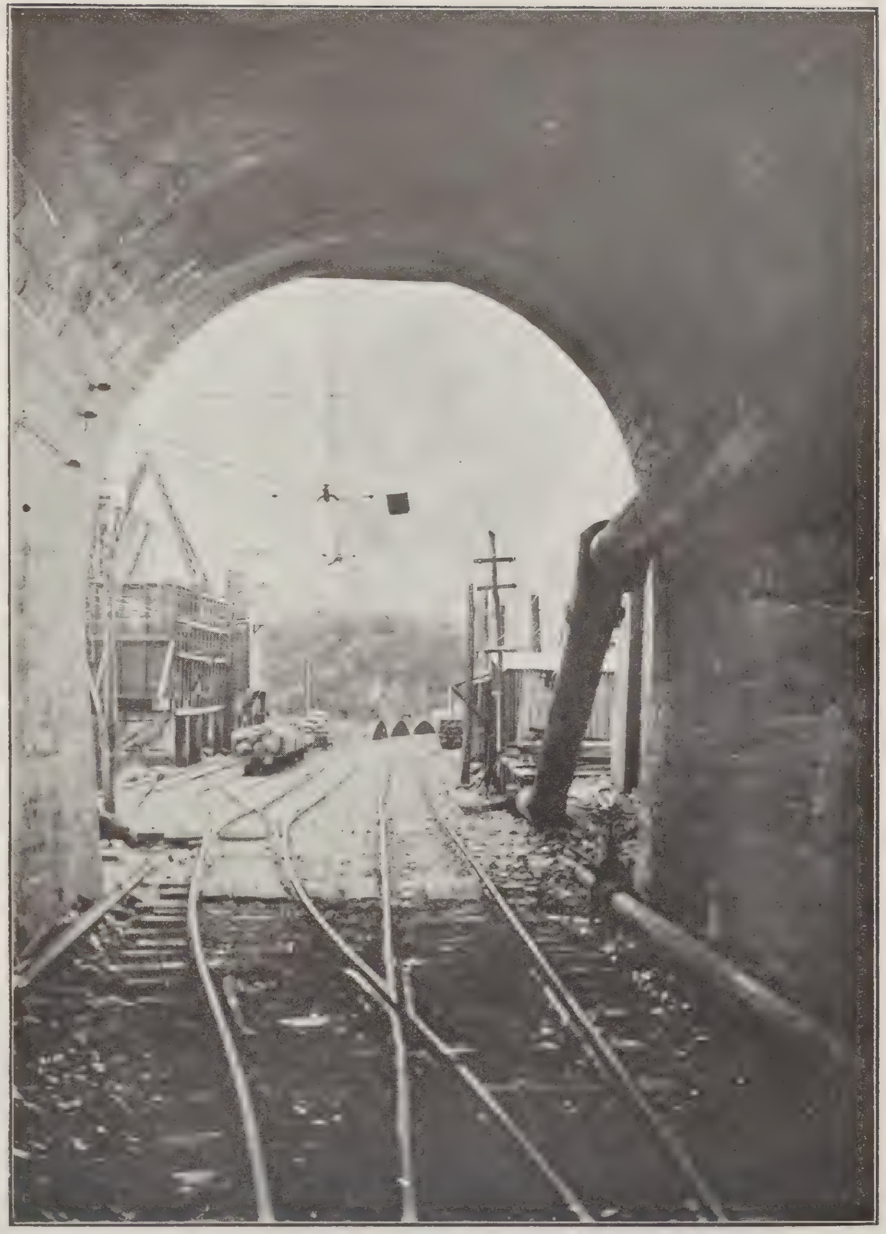
Midland Railway.—Protective Groynes, Waimakariri River.



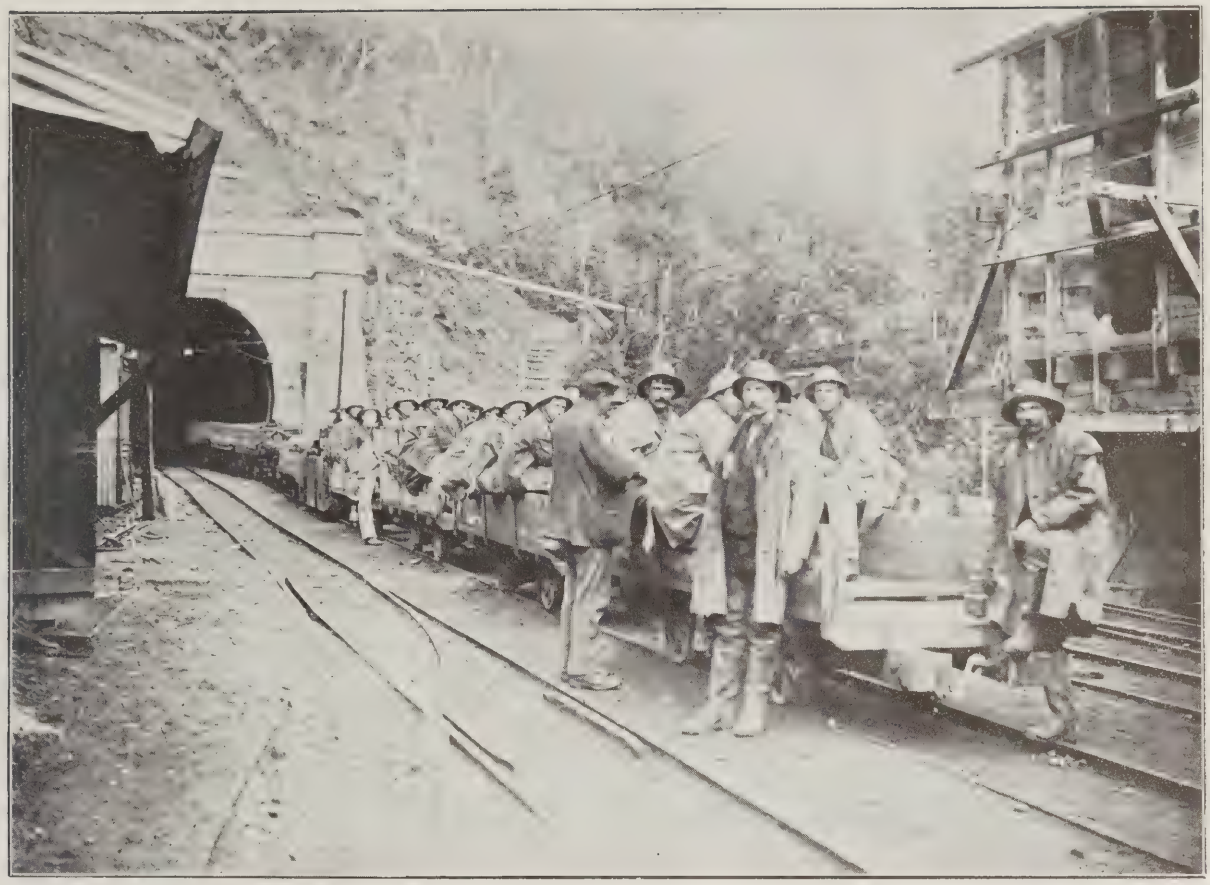
Midland Railway.—Protective Groynes and Facing, Bealey River.



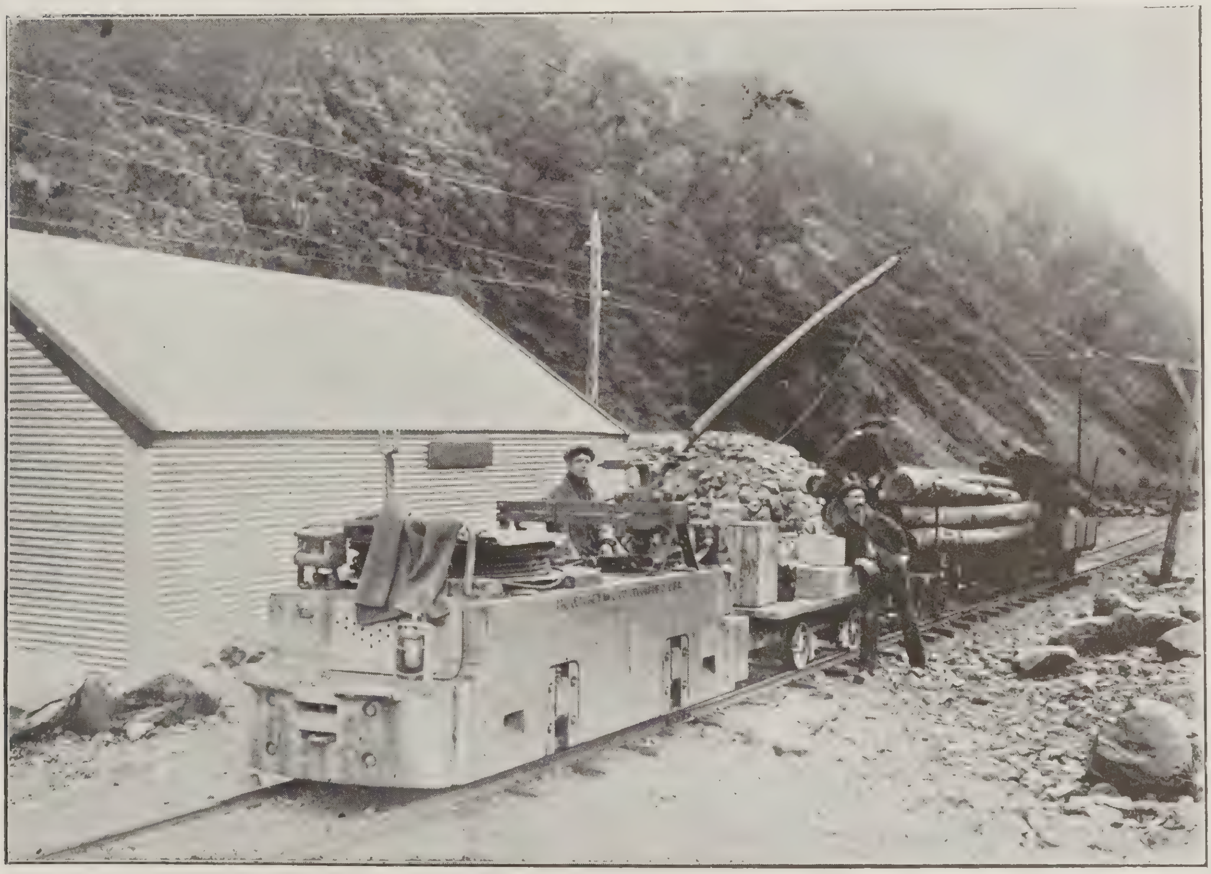
ARTHUR'S PASS TUNNEL.—OTIRA PORTAL. ROLLESTON RIVER IN FOREGROUND; ROLLESTON SPUR IN BACKGROUND.



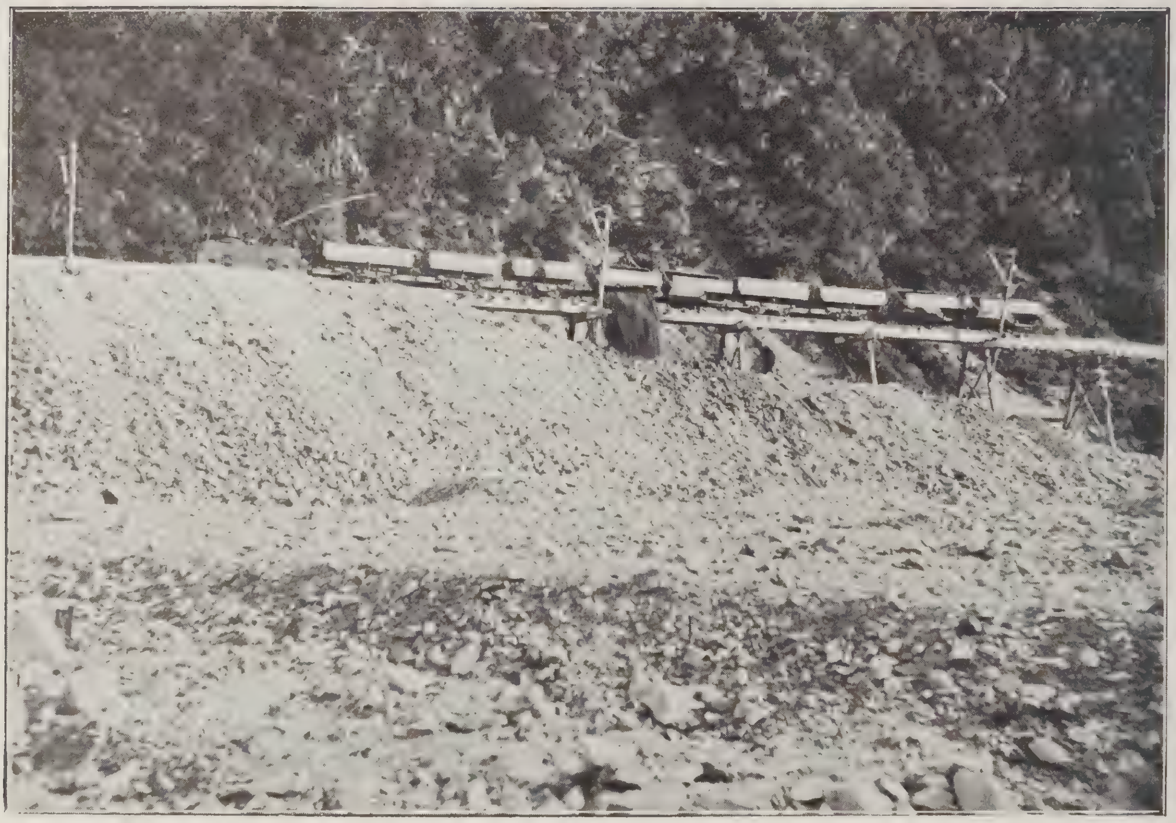
ARTHUR'S PASS TUNNEL.—OTIRA PORTAL, SHOWING VENTILATING, COMPRESSED-AIR, AND WATER PIPES ON RIGHT.



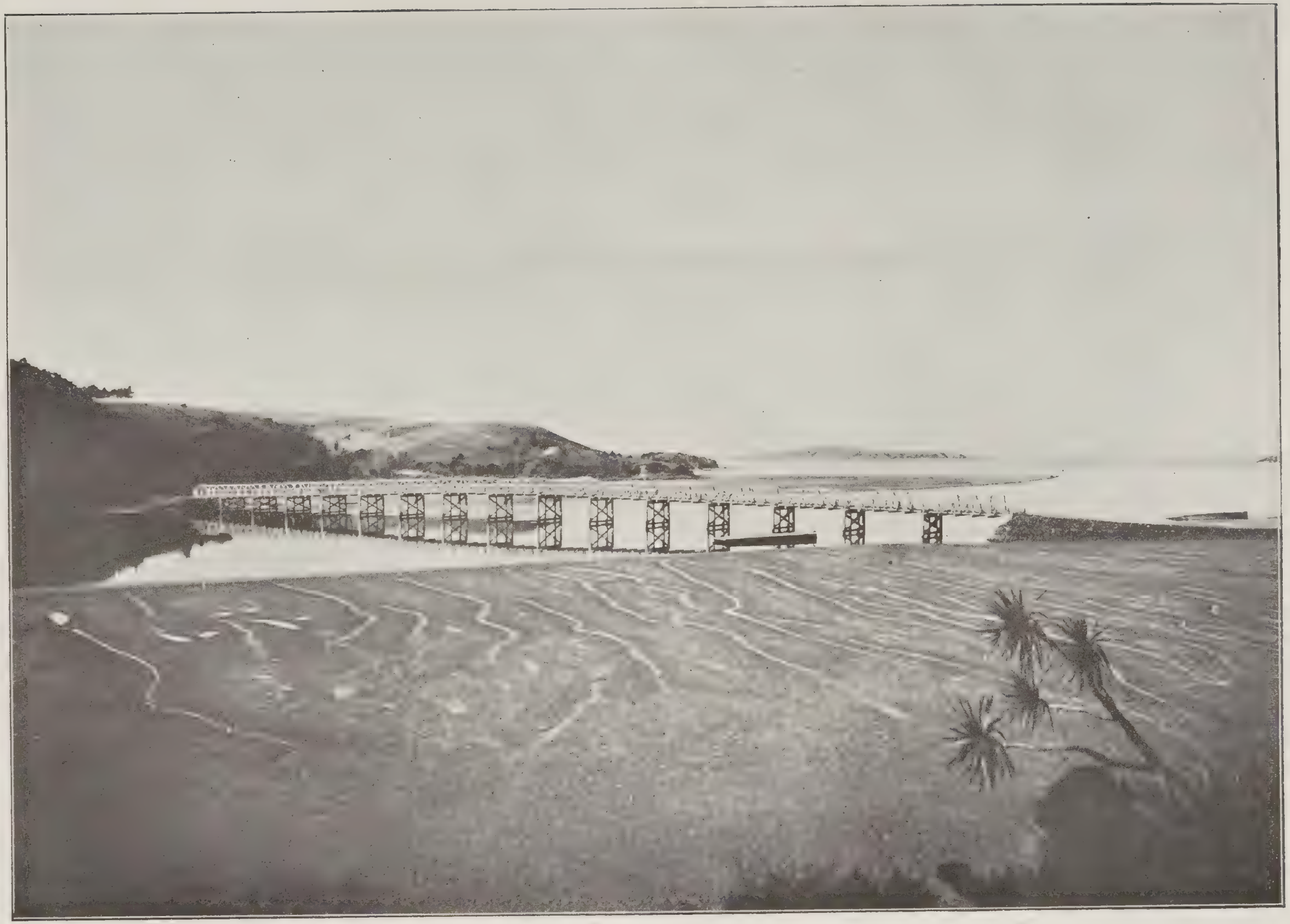
Arthur's Pass Tunnel.—Otira Portal.—Men going to Work.



Arthur's Pass Tunnel.—Electric Locomotive with Train of Explosives and Timber.



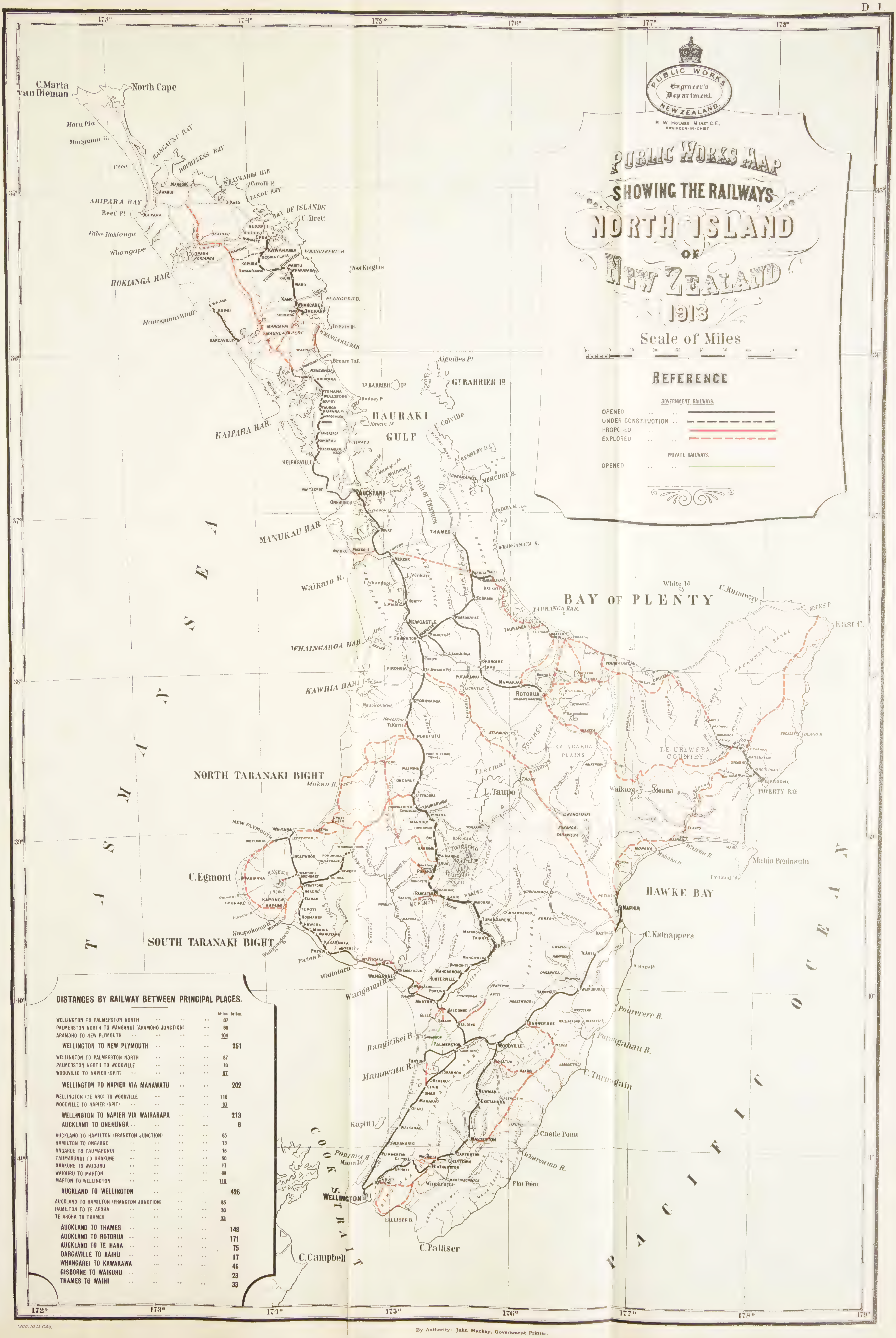
Arthur's Pass Tunnel.—Tipping Trucks of Excavated Rock from Staging in Otira River Bed.



TAIERI MOUTH ROAD-BRIDGE.

Total length, 661 ft. Width between wheel-guards, 12 ft. Sixteen spans of 41 ft. 4 in. Reinforced-concrete piers and abutments. Superstructure of mixed Australian hardwoods.

Taieri Mouth Road-bridge.



R. W. Holmes, M.Inst.C.E., Engineer-in-Chief

PUBLIC WORKS MAP SHOWING THE RAILWAYS NORTH ISLAND OF NEW ZEALAND 1913

Scale of Miles

10 0 10 20 30 40 50 60 70 80

REFERENCE

GOVERNMENT RAILWAYS.

OPENED	▬▬▬
UNDER CONSTRUCTION ..	‒ ‒ ‒ ‒
PROPOSED ..	▬▬▬
EXPLORED	‒ ‒ ‒ ‒

PRIVATE RAILWAYS.

OPENED	▬▬▬

DISTANCES BY RAILWAY BETWEEN PRINCIPAL PLACES.

	Miles.	Miles.
WELLINGTON TO PALMERSTON NORTH	87	
PALMERSTON NORTH TO WANGANUI (ARAMOHO JUNCTION) ..	60	
ARAMOHO TO NEW PLYMOUTH	104	
WELLINGTON TO NEW PLYMOUTH		251
WELLINGTON TO PALMERSTON NORTH	87	
PALMERSTON NORTH TO WOODVILLE	18	
WOODVILLE TO NAPIER (SPIT)	97	
WELLINGTON TO NAPIER VIA MANAWATU		202
WELLINGTON (TE ARO) TO WOODVILLE	116	
WOODVILLE TO NAPIER (SPIT)	97	
WELLINGTON TO NAPIER VIA WAIRARAPA		213
AUCKLAND TO ONEHUNGA		8
AUCKLAND TO HAMILTON (FRANKTON JUNCTION)	85	
HAMILTON TO ONGARUE	75	
ONGARUE TO TAUMARUNUI	15	
TAUMARUNUI TO OHAKUNE	50	
OHAKUNE TO WAIOURU	17	
WAIOURU TO MARTON	68	
MARTON TO WELLINGTON	116	
AUCKLAND TO WELLINGTON		426
AUCKLAND TO HAMILTON (FRANKTON JUNCTION)	85	
HAMILTON TO TE AROHA	30	
TE AROHA TO THAMES	33	
AUCKLAND TO THAMES		148
AUCKLAND TO ROTORUA		171
AUCKLAND TO TE HANA		75
DARGAVILLE TO KAIHU		17
WHANGAREI TO KAWAKAWA		46
GISBORNE TO WAIKOHU		23
THAMES TO WAIHI		33

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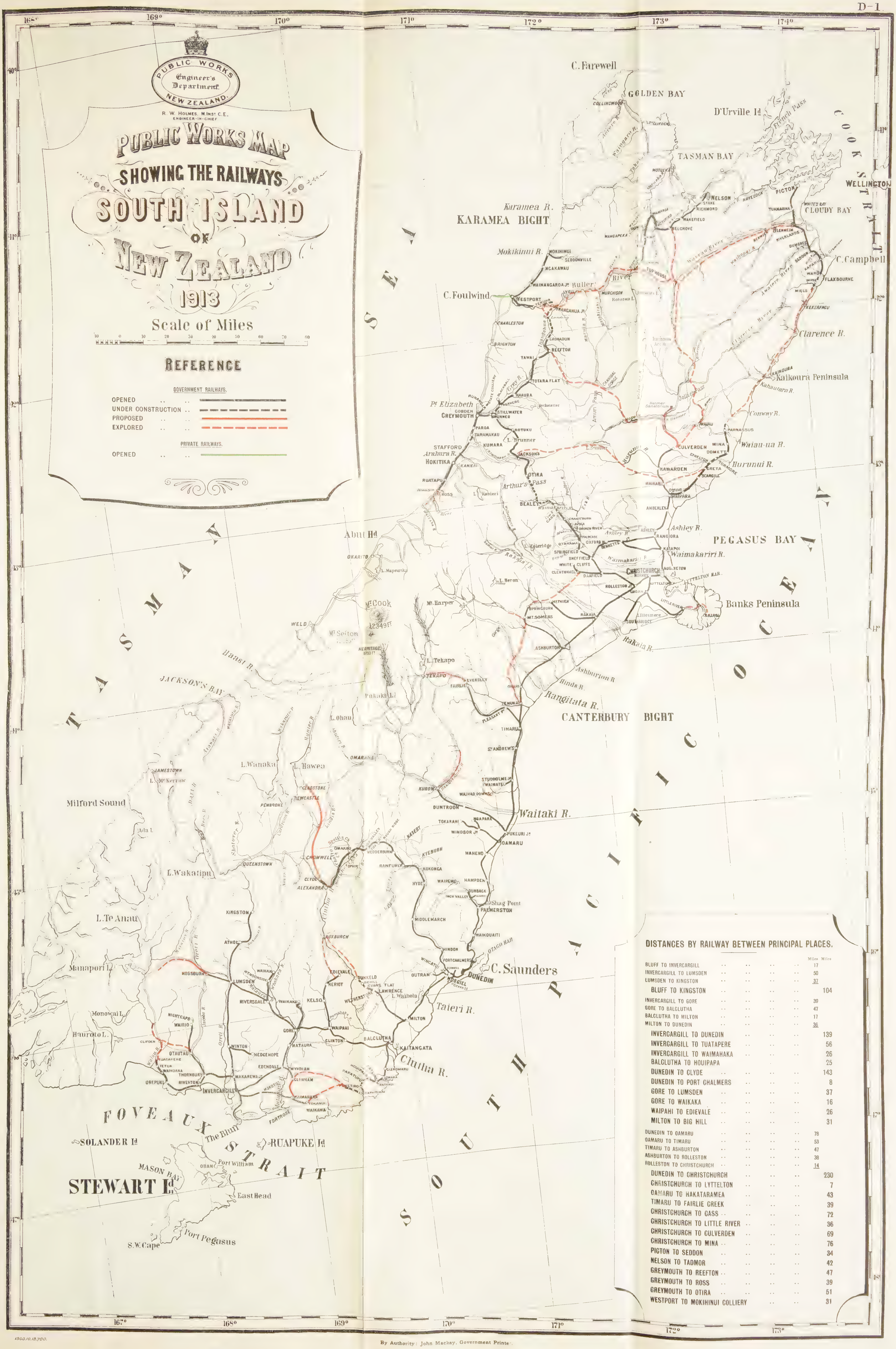

PUBLIC WORKS
Engineer's Department
NEW ZEALAND.

R. W. Holmes, M.Inst.C.E.
Engineer-in-Chief

PUBLIC WORKS MAP
SHOWING THE RAILWAYS
SOUTH ISLAND
OF
NEW ZEALAND
1913

Scale of Miles

10 0 10 20 30 40 50 60 70 80

REFERENCE

GOVERNMENT RAILWAYS.

OPENED	▬
UNDER CONSTRUCTION ..	▬ ▬
PROPOSED	🟥
EXPLORED	🟥 🟥

PRIVATE RAILWAYS.

OPENED	🟩

DISTANCES BY RAILWAY BETWEEN PRINCIPAL PLACES.

	Miles	Miles
BLUFF TO INVERCARGILL	17	
INVERCARGILL TO LUMSDEN	50	
LUMSDEN TO KINGSTON	37	
BLUFF TO KINGSTON		104
INVERCARGILL TO GORE	39	
GORE TO BALCLUTHA	47	
BALCLUTHA TO MILTON	17	
MILTON TO DUNEDIN	36	
INVERCARGILL TO DUNEDIN		139
INVERCARGILL TO TUATAPERE		56
INVERCARGILL TO WAIMAHAKA		26
BALCLUTHA TO HOUIPAPA		25
DUNEDIN TO CLYDE		143
DUNEDIN TO PORT CHALMERS		8
GORE TO LUMSDEN		37
GORE TO WAIKAKA		16
WAIPAHI TO EDIEVALE		26
MILTON TO BIG HILL		31
DUNEDIN TO OAMARU	78	
OAMARU TO TIMARU	53	
TIMARU TO ASHBURTON	47	
ASHBURTON TO ROLLESTON	38	
ROLLESTON TO CHRISTCHURCH	14	
DUNEDIN TO CHRISTCHURCH		230
CHRISTCHURCH TO LYTTELTON		7
OAMARU TO HAKATARAMEA		43
TIMARU TO FAIRLIE CREEK		39
CHRISTCHURCH TO CASS		72
CHRISTCHURCH TO LITTLE RIVER		36
CHRISTCHURCH TO CULVERDEN		69
CHRISTCHURCH TO MINA		76
PICTON TO SEDDON		34
NELSON TO TADMOR		42
GREYMOUTH TO REEFTON		47
GREYMOUTH TO ROSS		39
GREYMOUTH TO OTIRA		51
WESTPORT TO MOKIHINUI COLLIERY		31

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NUMBER

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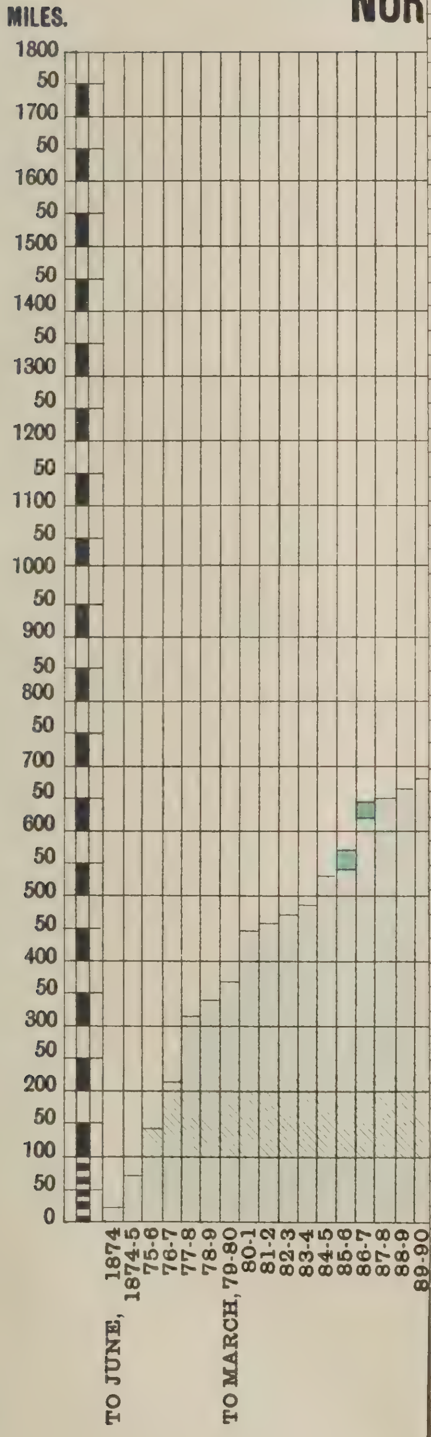
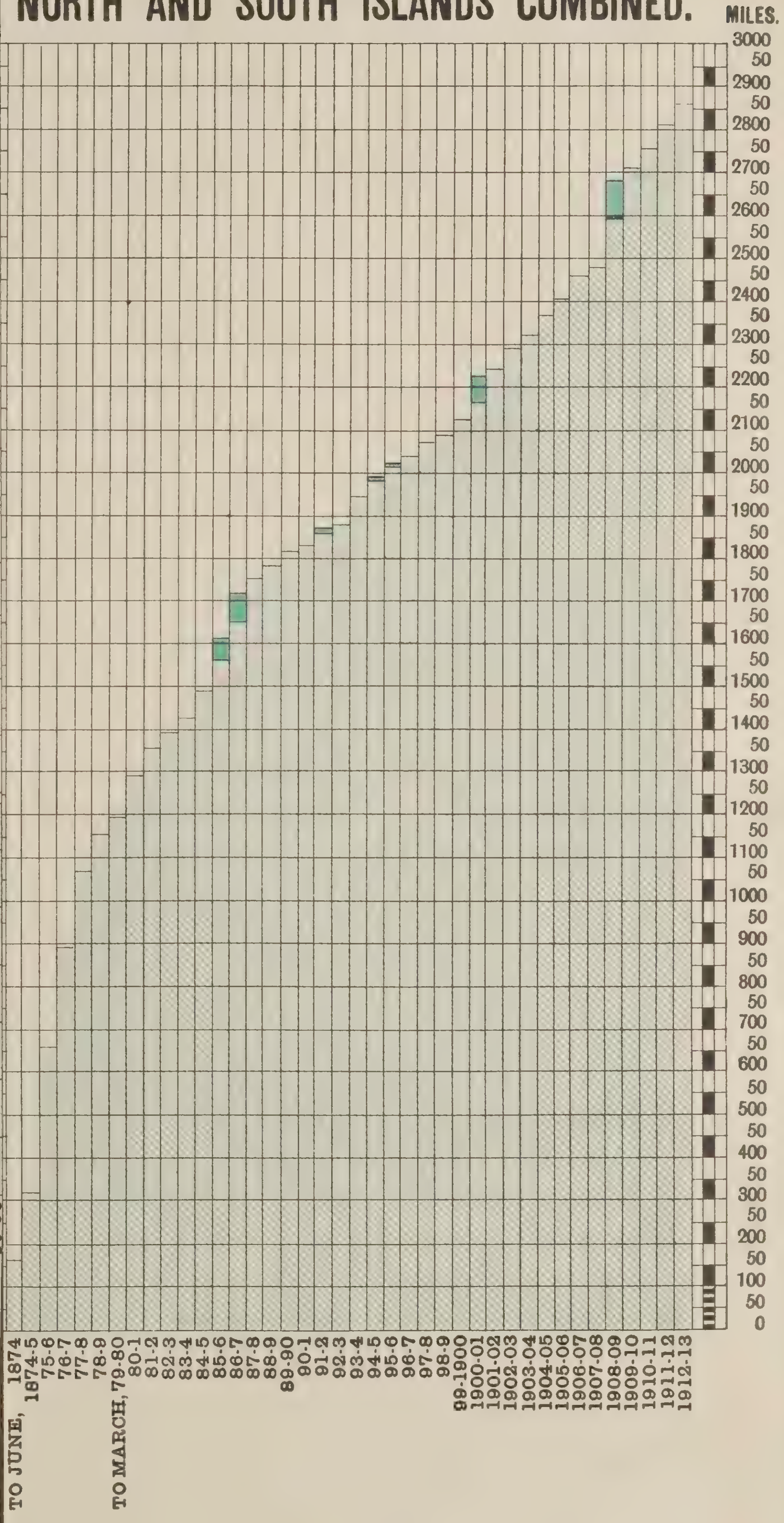


NUMBER OF MILES OPEN

OF

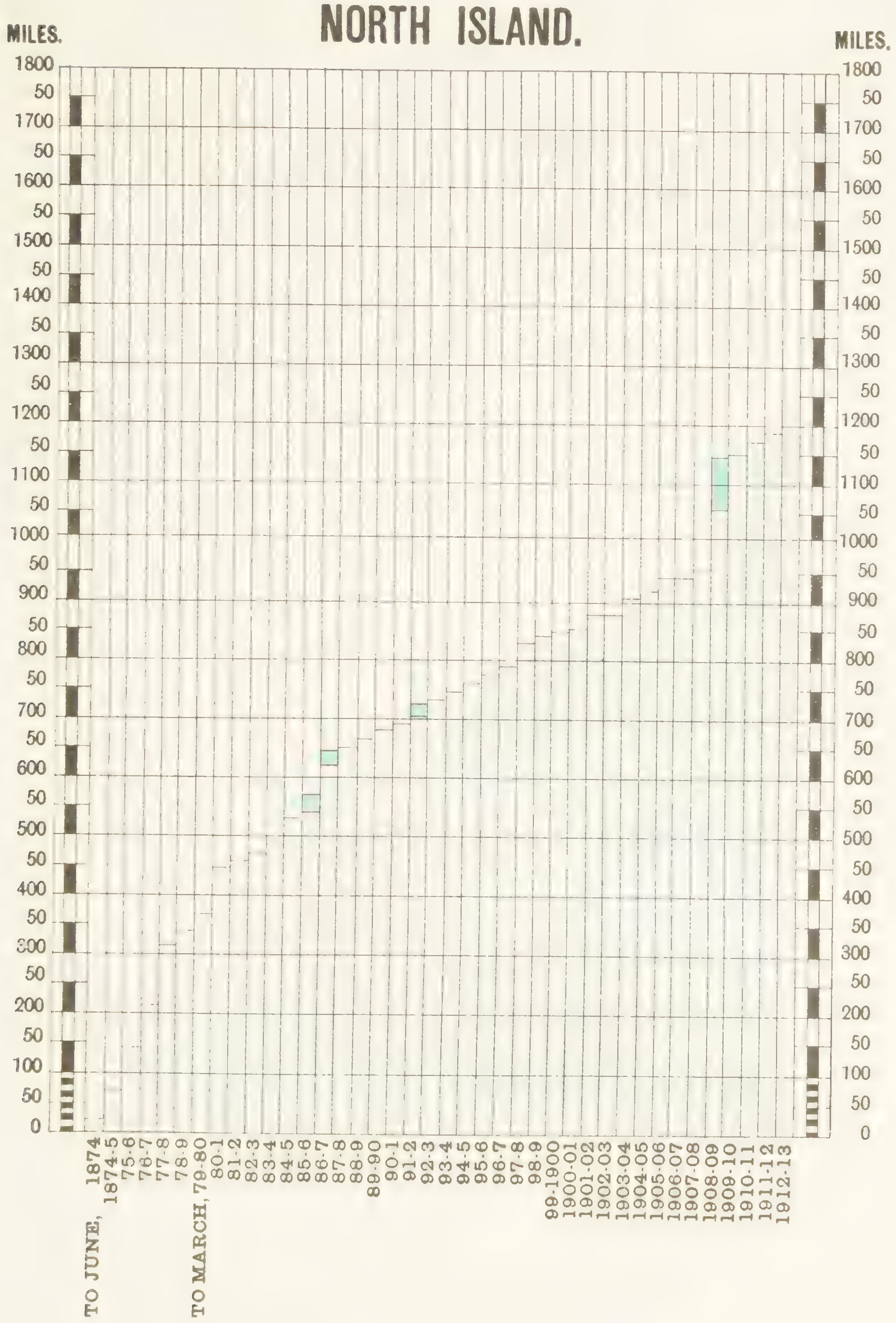
GOVERNMENT LINES.

NORTH AND SOUTH ISLANDS COMBINED.



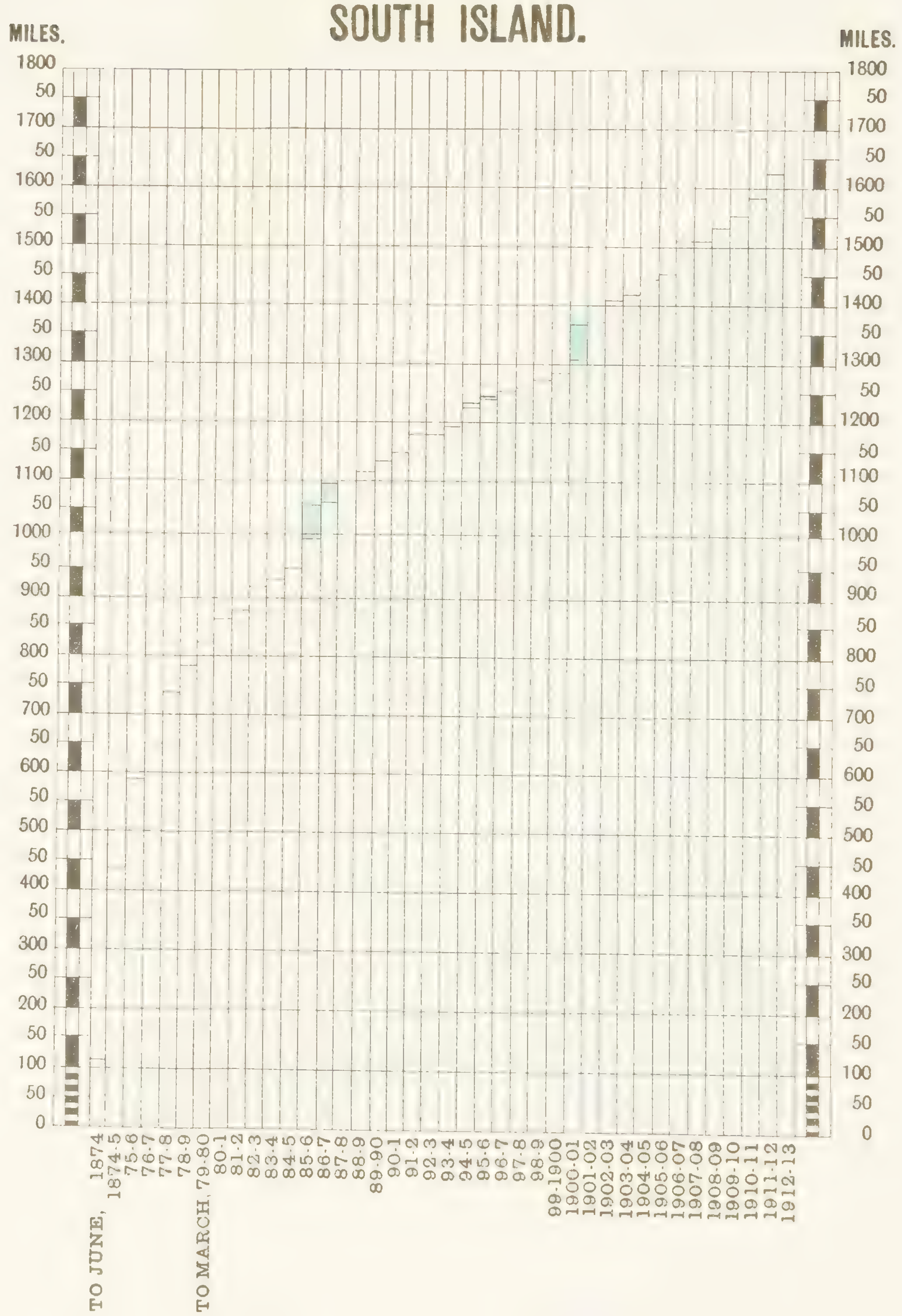
NUMBER OF MILES OPEN OF GOVERNMENT LINES.

NORTH ISLAND.



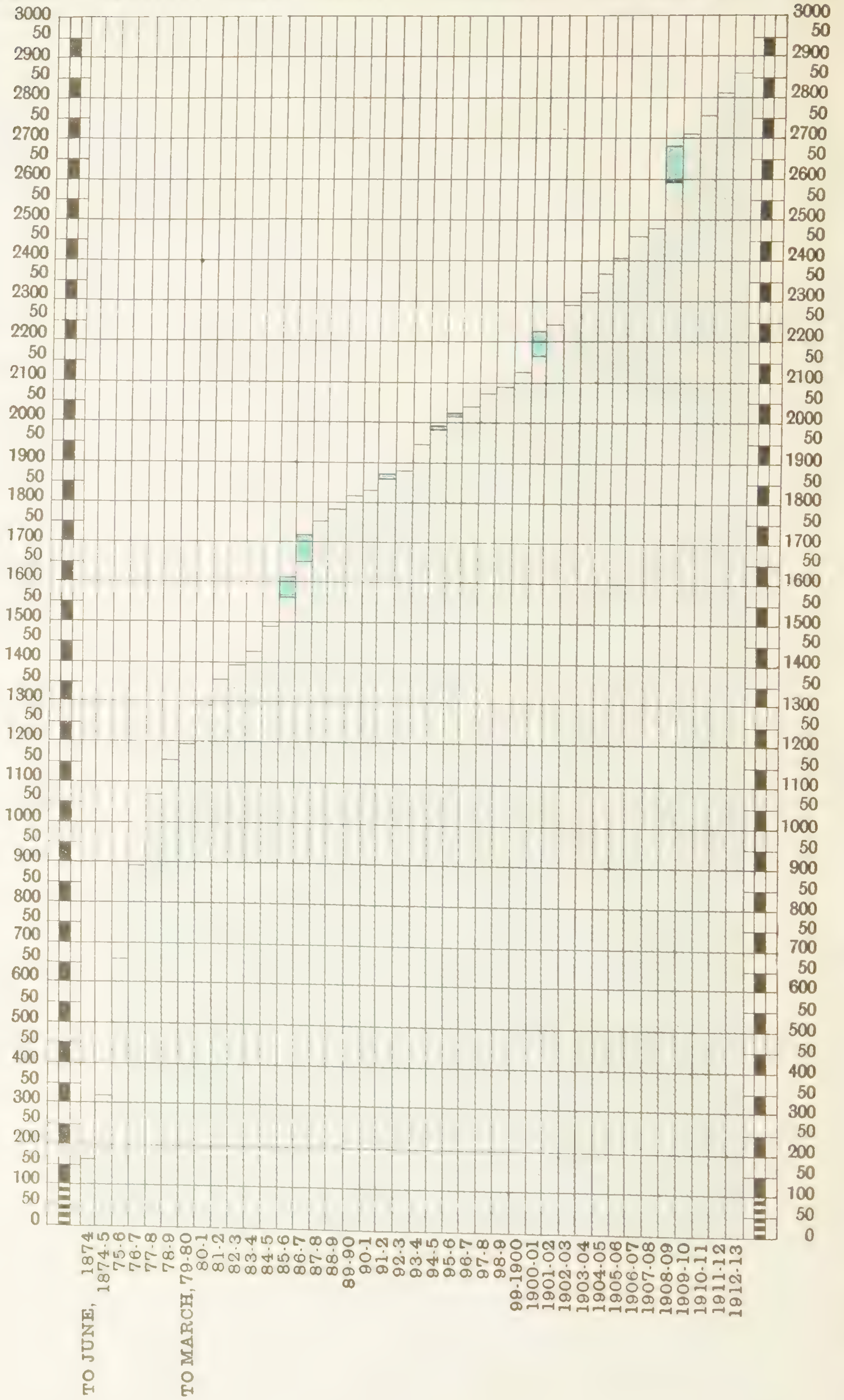
NUMBER OF MILES OPEN OF GOVERNMENT LINES.

SOUTH ISLAND.



NUMBER OF MILES OPEN OF GOVERNMENT LINES.

NORTH AND SOUTH ISLANDS COMBINED.



PRIVATE RAILWAYS ACQUIRED BY THE GOVERNMENT SHOWN 🟦

NEW ZEALAND.

RAILWAYS STATEMENT.

BY

THE HON. W. H. HERRIES,

MINISTER OF RAILWAYS.

1913.

INCLUDING ANNUAL REPORT OF GENERAL MANAGER OF RAILWAYS.

WELLINGTON.
BY AUTHORITY: JOHN MACKAY, GOVERNMENT PRINTER.

1913.

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NEW ZEALAND

RAILWAYS STATEMENT

BY THE MINISTER OF RAILWAYS, THE HON. W. H. HERRIES.

MR SPEAKER,—

The presentation of the Railways Statement for the year ending 31st March, 1913, imposes on me the pleasing duty of having to announce that the result of the year's operations has been satisfactory. The revenue has maintained the buoyancy that has characterized it during recent years, and the actual earnings have exceeded the estimate by £226,002 and the earnings of the preceding year by £294,493. The results may be summarized thus:—

	Year 1913. £	Year 1912. £
Total earnings	3,971,002	3,676,509
Total expenditure	2,705,609	2,465,896
Net profit on working	£1,265,393	£1,210,613

GENERAL.

The mileage of line open for traffic on the 31st March, 1913, was 2,860 miles, as against 2,808 miles for the previous year. The average miles operated during the year was 2,840 miles.

The following extensions were opened during the year:—

	M.	ch.
Westport – Te Kuha	5	61
Waikohu – Otoko	7	79
Te Wera – Pohokura	8	51
Mina – Parnassus	8	51
Kiwi – Glenhope	12	45
Te Hana – Kaiwaka	8	67
	52	34

The capital cost of lines open for traffic, including plant and steamers on Lake Wakatipu, has increased from £30,506,089 to £31,611,220.

The net revenue (£1,265,393) is equal to a return of 4·04 per cent. on the capital invested in the open lines, and 3·74 per cent. on the capital (£33,831,783) invested in opened and unopened lines.

The number of train-miles run during the year was 9,016,224, being an increase of 644,537. The increased train-mileage represents additional facilities to meet the requirements of the business and public convenience, and has cost over £193,000.

The addition made to the train services in the North Island account for 499,951 miles, and in the South Island services for 107,376 miles.

The principal additions and alterations involving the extra mileage were :—

In the North Island : Extension of Saturday night train Hikurangi to Hukerenui ; Auckland suburban services increased and extended north to Swanson and south to Papakura ; express service, Auckland to and from Helensville ; extra train Frankton Junction to Thames and back ; morning train, Huntly to Mercer and back on Saturdays ; extra express, Auckland to and from Morrinsville ; motor train between Morrinsville and Putaruru ; extra services between Te Kuiti and Taumarunui ; improved services between Wellington and Paekakariki, Wellington–Upper Hutt, Palmerston North – Foxton, Wellington–Woodville ; extra trains run to Te Aro instead of terminating at Lambton (Wellington) ; extra express between Wellington and Auckland during summer season. Of these services the Hikurangi–Hukerenui, Huntly–Mercer, Lambton – Te Aro, Wellington–Auckland second express, and Auckland–Morrinsville expresses have been discontinued owing to unsatisfactory results. The Putaruru–Morrinsville motor service does not nearly pay operating-expenses, but, as it meets a want in a district that is growing in importance and has few trains, it is being continued and extended in the hope that traffic may be developed in the near future.

In the South Island: Workers' train, Christchurch–Templeton ; accelerated service, Ashburton–Christchurch, two days per week ; extra train between Methven and Rakaia also, Timaru to Christchurch and back, on one day per week ; improved suburban service, Dunedin to Mosgiel and Port Chalmers ; workers' train, Bluff–Invercargill ; improved service, Gore–Lumsden and Invercargill–Orepuki–Tuatapere.

The Christchurch–Templeton workers' train and the Timaru–Christchurch–Methven and Cheviot Branch Wednesday services proved unpayable, and were consequently discontinued.

Floods and slips of a heavy character occurred on several occasions during the year and caused considerable interruption to the train services. The Main Trunk line was blocked for four days from the 20th to 24th June by slips at Poro-o-tarao and Horopito, passengers and mails having to be transhipped by coaches run between Ohakune and Horopito. The Cheviot–Eyreton and Methven lines were flooded on the 11th, 12th, and 13th July; Wellington–Woodville line interrupted by washouts and slips on the 16th and 17th July. Canterbury–West Coast line was blocked from the 17th to the 20th July by a slip near Broken River, passengers being transhipped by coach. The North Island Main Trunk line was blocked by a slip near Horopito from the 11th to the 16th October, passengers being transhipped by coaches run to and from Ohakune. On the 28th and 29th March heavy floods in Southland caused suspension of traffic until the 31st March, when train services were resumed between Clinton–Invercargill–Kingston, and on Waimea Plains, Waikaka, Forest Hill, and Seaward Bush lines. The Nightcaps and Tuatapere lines resumed working on the 1st April, and Wyndham and Mararoa Branches later.

On the 29th March a heavy flood in the Rangitata River damaged the railway-bridge, rendering it unsafe for trains to cross. Passengers were transferred to trains on either side, but it was not until the 2nd April that repairs were sufficiently far advanced to make the bridge safe for the passage of trains drawn by light engines.

The following figures, which give the record of the late arrival of the principal trains during the year, indicate that, notwithstanding various alterations made in the train services and the difficulties encountered in connection with and arising out of floods, slips, and other unforeseen and unavoidable circumstances, the trains as a whole have maintained punctuality.

	AVERAGE LATE ARRIVAL.			
	Min.		Min.	
For long-distance passenger trains	1·67	against	2·23	last year.
For suburban trains	0·56	,,	0·52	,,
For long-distance mixed trains	2·58	,,	2·99	,,

The passenger traffic for the year increased very materially, the number actually carried being 13,123,879, an increase of 1,232,745 over the previous year. Season tickets issued number 265,259, an increase of 28,302. The number of workers' twelve-trip tickets issued was 53,697, and of workers' weekly tickets available over suburban lines 148,954, an increase of 4,621 twelve-trip and 19,430 workers' weekly tickets over the previous year.

Holiday excursion tickets issued numbered 964,695, an increase of 124,222 on the traffic of the previous year; school, factory, and friendly societies' excursions numbered 133,897, a decrease of 928 on last year's figures.

The coaching traffic shows substantial increases under each of the headings under which the traffic is grouped. The increases are: Parcels, 129,966; horses, 1,461; carriages, 103; dogs, 1,232.

In the goods and live-stock traffic the increases are: Drays, 285; cattle and calves, 14,049 head; chaff, lime, &c., 21,528 tons; wool, 6,128 tons; firewood, 1,636 tons; grain, 232,343 tons; merchandise, 34,768 tons; minerals, 84,200 tons.

There were decreases in—sheep, 65,638 head; pigs, 11,138 head; and timber, 23,353 tons. The principal factor in connection with the decrease in sheep traffic was the labour trouble with the slaughtermen. This restricted the operations of the various freezing companies to a very considerable extent, as shown by the falling-off of 272,000 head of sheep in the Wellington, Picton, and Invercargill districts. In other districts the sheep business shows an advance on that of the previous year. The decrease in the number of pigs was caused through a drop in the number raised by dairy-farmers, there being more inducement for farmers to rear calves than pigs. The heavy drop in the timber traffic is chiefly in the Westland and Christchurch districts, and is ascribed to the financial stringency on the West Coast causing a material decrease in the export of timber to Canterbury ports.

The average number of men employed on the railways during the year was 14,213, against 13,523 for the previous year.

During the year 13 members of the Second Division were promoted to the First Division; 462 members of the permanent staff resigned, 98 retired on superannuation, 42 died, 97 were dismissed, and 1,209 were engaged.

The sum of £12,616 was paid during the year under the Workers' Compensation for Accidents Act.

The rolling-stock was augmented by the addition of twenty new engines. Of this number thirteen, comprising five large tender engines, Class Ba, and eight heavy tank engines, Class Wg, were built in the Government railway workshops. Seven Class Ad 72-ton four-cylinder balanced compound tender engines were completed under the contract with Messrs. A. and G. Price (Limited), of Thames.

There were 77 new bogie cars, 5 bogie brake-vans, 1,032 wagons, and 1,267 tarpaulins turned out of the railway workshops during the year.

2,182 modern steel axles were placed under cars, brake-vans, and wagons in substitution of the old iron axles. The effect of this alteration is to increase the carrying-capacity of each wagon by 2 tons, while giving greater stability to the wagon.

The quantity of Pintsch gas manufactured at the railway gasworks was 9,994,930 cubic feet. On the sections not provided with Pintsch gas the cars are lighted with acetylene gas, and practically all the cars on the small sections are now equipped with this system of lighting.

During the year 104¼ miles of track were relaid: 83½ miles of main line with 70 lb. rails, 20 miles of branch line with 53 lb. rails removed from main lines, and three-quarters of a mile of branch line with new 55 lb. steel material. Ballast to the extent of 290,000 cubic yards and 235,378 sleepers were put into the track during the year. Difficulties experienced by shipowners in respect to labour prevented the Department from getting delivery of sleepers contracted for, and this materially retarded relaying operations.

A considerable number of improvements have been carried out at various stations connected with the railway system throughout the Dominion. They consist of increased accommodation at stations, additions to station buildings, erection of verandas, extension of sidings, provision of water-services and stock-yards, social halls for staff, erection of turntables, cranes, houses for staff, improved lighting at stations, workshops, strengthening bridges, sanitary conveniences, fire-prevention services, and many other works too numerous to particularize. The programme now in hand comprises works that are intended to give increased facilities for meeting the public requirements and at the same time enable the Department to carry on its operations satisfactorily.

The signal and interlocking systems have been brought into operation during the year at Gore, Abbot's Creek, Black Jack's Point, Fendalton tramway crossing, Paeroa, Pokeno grade-easement crossing, Otahuhu, and Westfield. The interlocking has also been added to and rearranged at Abbotsford, Christchurch, Pukerua, Thorndon, Taihape, and Remuera.

Eighty-two electric tablet instruments and 115 miles of line have been brought into operation on the sections Waipukurau–Napier, Greymouth–Dunollie, Henderson–Kaukapakapa, Morrinsville–Putaruru ; and Waikumete, Pokako, Kakahi, Porewa, Hangatiki, Marakeke, Okahukura, Linton ballast-pit have also been installed as tablet stations.

Automatic tablet exchanges were fitted at twenty-seven additional stations.

The electric lock-and-block system for double-line working was brought into operation between Abbotsford and Abbot's Creek. Thirteen additional stations were equipped with fixed semaphore signals, and the telegraph and telephone system increased by 493 miles of wire.

1,504 miles of line are now controlled by the electric tablet system, 39½ miles of double track by the electric lock-and-block system.

The railway telegraph and telephone facilities now comprise 2,295 miles of poles and 6,133 miles of wire.

The expenditure on the various adjuncts to safety since 1901 has amounted to no less than £301,051.

The whole of the railway appliances and equipment, comprising rolling-stock, machinery, track, bridges, buildings, and other structures, have been maintained in an efficient and satisfactory condition.

REVENUE.

The gross revenue for the year amounted to £3,971,002. It exceeded the estimate by £226,002 and the gross revenue for the preceding year by £294,493.

Passenger revenue shows an increase of £128,514 ; season tickets, £14,244 ; coaching traffic, £11,875 ; goods and live-stock, £124,902 ; miscellaneous, rents and commission, £14,958.

The receipts per train-mile from the North Island main line and branches amounted to 8s. 1½d. against 8s. 4d. for the previous year, a decline of 2½d. per train-mile in gross receipts. The net revenue per train-mile was 2s. 7·30d., against 2s. 10·76d. last year, a decline of 3·46d. From the South Island main line and branches the gross receipts per train-mile were 9s. 2¾d., against 8s. 9¼d. for the previous year, an advance of 5½d. per train-mile in gross receipts. The net receipts per train-mile advanced by 3·05d. For all lines the gross receipts were 8s. 9½d., as against 8s. 9¼d. for last year, an increase of 0·25d. per train-mile.

The net earnings amounted to £446 per mile for the average number of miles open, and gave a return of 4·04 per cent. on the capital cost. This return is the highest but one ever earned by our railways.

The earnings of the Lake Wakatipu steamers amounted to £7,021, as against £6,669 last year.

EXPENDITURE.

The expenditure for the year, including the sum of £6,618 incurred in connection with the Lake Wakatipu steamers, amounted to £2,705,609, an increase of £239,713 over the previous year, and absorbed 68·13 per cent. of the revenue, as against 67·07 per cent. for the previous year.

	Expenditure.		Per Cent. of Revenue.	
	1912–13.	1911–12.	1912–13.	1911–12.
	£	£		
Traffic	768,937	670,632	19·40	18·27
Locomotive	1,059,292	952,482	26·73	25·96
Maintenance	765,860	735,546	19·32	20·04
Management	104,902	101,239	2·64	2·76
	2,698,991	2,459,899	68·09	67·03
Lake Wakatipu steamers ...	6,618	5,997	0·04	0·04
	2,705,609	2,465,896	68·13	67·07

The increased expenditure in the Traffic Branch is due to the additional train-mileage, increases in salaries and wages of the staff, extension of tablet system and extra staff required to carry on the increasing business and operate the safety appliances installed.

In the Locomotive Branch the increase is due to the extra train-mileage, additional staff to meet requirements of the business, advances in salaries and wages, and the prices paid for fuel, stores, and material.

The increase in the cost of Head and departmental offices is incidental to the inclusion in the Head Office vote of items that have previously been charged under the sectional heading, and to scale increases of salaries under the Classification Act.

The cost of maintenance of lines, buildings, structures, safety appliances, &c., has increased from £735,546 to £765,860, representing an average of £270·61 against £263·46 per mile of railway for the previous year.

The increased expenditure has been incurred on the Whangarei–Kawakawa Section, £187; Gisborne, £1,579; North Island main line and branches, £27,414; South Island main line and branches, £3,099; Westland, £1,091; Picton, £91. The cost of maintenance has decreased on the Kaihu Section, £144; Westport, £1,315; Nelson, £1,688. In this branch also the principal increase has resulted from advance in the wages of the staff and the price of materials.

Additions and improvements to lines, structures, rolling-stock, &c., costing £50,319, which might reasonably have been debited to capital have been made during the year and charged to working-expenses.

The sum of £444,101 was expended under the head "Additions to open lines" and charged to Capital Account. Of this amount £279,524 was expended on rolling-stock, tarpaulins, pneumatic coaling-cranes, Westinghouse brake, Pintsch gas, steam heating-gear, foot-warmers, workshop machinery, and steamer for Lake Wakatipu service.

The rolling-stock in respect to which the charges were made consists of 20 locomotives, 71 carriages, 4 brake-vans, 40 bogie and 927 four-wheeled wagons, and 1,267 tarpaulins completed on the 31st March, 1913; and 44 locomotives, 99 carriages, 26 brake-vans, 113 bogie and 1,438 four-wheeled wagons, and 2,025 tarpaulins incomplete but in hand on that date.

The sum of £164,577 was spent in additions to station buildings, extension of station-yards and siding accommodation, water-services, additional dwellings, purchase and reclamation of land, additions to workshops, cranes, weighbridges, turntables, stone-crusher, bridgework and subways, fire-prevention services, wharves, gasworks, extension of signal and interlocking system, tablet-installation, telegraph and telephone facilities, duplication of line, reduction in grades and improvement of curves, &c.

DUPLICATION OF LINES.

Expenditure under the Railways Improvements Authorization Act, 1904—Dunedin–Mosgiel duplication and deviation of line, £29,253 13s. 3d.

RESULTS OF WORKING.

The following is a summary of results of working, for year ending the 31st March, 1913, as compared with 1912:—

Particulars.	Year ended 31st March.	
	1912.	1913.
Total miles open for traffic	2,808	2,860
Average miles open for year	2,801	2,840
Capital cost of opened and unopened lines	£32,689,179	£33,831,783
Capital cost of open lines	£30,506,089	£31,611,220
Capital cost per mile of open lines	£10,864	£11,053
Gross earnings	£3,676,509	£3,971,002
Working-expenses	£2,465,896	£2,705,609
NET PROFIT ON WORKING	**£1,210,613**	**£1,265,393**
PERCENTAGE OF PROFIT TO CAPITAL INVESTED	**3·98**	**4·04**
PERCENTAGE OF WORKING-EXPENSES TO EARNINGS	**67·07**	**68·13**
Earnings per average mile open	£1,314	£1,400
Working-expenses per average mile open	£881	£954
NET EARNINGS PER AVERAGE MILE OPEN...	**£433**	**£446**
	d.	d.
Earnings per train-mile	105·25	105·50
Working-expenses per train-mile	70·52	71·84
NET EARNINGS PER TRAIN-MILE ...	**34·73**	**33·66**
Passengers, ordinary	11,891,134	13,123,879
Season tickets	236,957	265,259
Goods tonnage	5,599,756	5,957,005
Live-stock tonnage	288,152	289,123
Train-mileage	8,371,687	9,016,224
Locomotives	493	513
Passenger-cars	1,212	1,282
Wagons and brake-vans	18,521	19,515

CONCLUDING REMARKS AND FORECAST.

The Hutt Road having been completed in readiness for handing over to the local bodies, a Commissioner was appointed in terms of the Act to hear evidence and apportion the charges incurred in connection with the formation of the road. The report of the Commissioner has now been received, and is engaging the attention of the Government. I anticipate that a final decision will be come to at an early date, and, as it is essential that the Railway Department should be relieved of the responsibility attaching to the upkeep of the road, over which it has practically no jurisdiction, arrangements are being made to vest the control of the thoroughfare in the Wellington City Council, which body has the largest interests involved. The apportionment of the charges as fixed by the Commissioner will also be gazetted in due course.

During the year an extension of about three-quarters of a mile of the double line between Dunedin and Mosgiel was opened for traffic, and steady progress has been made with the piercing of the Chain Hills tunnel. The bad ground met with interfered materially with the boring operations, but as more favourable indications are now in evidence better progress is anticipated from now onwards to the completion of the tunnel, of which some 15 chains remain to be bored.

Considerable progress has been made in connection with grade improvements in the North Island. On the Main Trunk line the improvements between Buckland and Tuakau, and at Pukekohe, have been completed, and a commencement made at easing grades between Tuakau and Pokeno. On the Wanganui - New Plymouth line the earthworks for the Manawapou Viaduct improvement are finished as far as practicable pending completion of the viaduct, construction of which is in hand. The reclamation of land in Mechanics Bay, Auckland, is in hand, and the sum of £11,089 was paid to the Auckland Harbour Board for reclamation carried out by the Board under agreement with the Railway Department.

Messrs. Price (Limited) delivered during the year seven Ad locomotives constructed by them under contract, and have still to construct thirteen engines of the same type under existing contract.

The rolling-stock under construction in the railway workshops on the 31st March consisted of 10 Class X 94-ton four-cylinder balanced compound, 1 Class Ba goods engine, and 20 Class Wg tank engines. The improvements and additions made to the rolling-stock during the past eighteen years have increased the tractive power by 259 per cent., seating-capacity by 208 per cent., wagon-capacity by 212 per cent. During the same period the rolling-stock equipment has been increased by 244 locomotives, 784 cars, 181 brake-vans, 1,053 sheep-trucks, 9,813 goods-wagons.

Special and sustained efforts are made to build rolling-stock with despatch so as to keep pace with the demands of the existing and prospective traffic. The programme for 1913–14 comprises 65 bogie cars, 19 bogie brake-vans, 68 bogie wagons, 522 four-wheeled wagons. The total rolling-stock actually under order at the present time comprises 44 locomotives, 108 cars, 27 brake-vans, 113 bogie wagons, and 1,475 four-wheeled wagons.

The investigations made into the results of the motor-car experiments carried out over extended periods by other railway systems has shown the wisdom of proceeding cautiously in regard to ordering motor-cars for use on the New Zealand railways. Material alterations and improvements in this class of vehicle are daily taking place, but as a consequence of the satisfactory result of extended trials made on the South African lines two cars have been ordered for trial purposes on our railways. They will be placed in commission as early as possible after arrival in the Dominion, and if the results come up to anticipation the use of the cars will be extended as circumstances permit.

The new steamer, "Earnslaw," built for the Lake Wakatipu service by Messrs. McGregor, of Dunedin, was placed in commission during the last summer season. The vessel fulfilled all requirements of the contract. It has a gross tonnage of 329 tons, carries 1,000 passengers, and steamed on trial trip 15 knots per hour. The vessel has already established itself as a favourite on the lake, but it is too large and costly to run during the winter season when the traffic is light.

With a view to bringing the producer and consumer into closer relations, for the mutual benefit of both, arrangements were made for the through booking of fruit from various parts of the Dominion. Delivery at destination was also provided for in the case of larger centres, and a minimum rate of freight was fixed for both rail and sea transport. The steamship companies readily joined in the scheme and assisted as far as practicable. The Postal Department co-operated and arranged that orders for fruit might be transmitted through Postmasters to growers direct. Wide publicity was given to the arrangements, and every endeavour made in other directions to ensure the success of the project. The traffic results were, however, distinctly disappointing, the resultant business being insufficient to recoup the cost of bringing the arrangements into force.

In response to strong representations made respecting conveyance of fruit from Auckland to Wellington by express, special arrangements were made, on the assurance of those concerned, that the traffic would amount to about 5 tons per day. In actual practice it did not average 5 cwt. per day, a quantity altogether inadequate to justify the running of a bogie wagon. Similar experience followed the efforts made to foster the fish industry and meet the requests of fishermen for improved means of transport. The traffic did not expand, consequently the cost of operating became greater than the value of the business, and loss resulted. This will readily be understood when it is remembered that 56 lb. of fruit can be railed any distance over a connected railway for 6d., and 7 lb. of fish any distance for 6d. Consumers who deal direct with producers can obtain the benefit of these rates, and it is a matter of surprise that the producer and consumer do not, under such circumstances, get into direct touch and take advantage of the facilities provided to enable them to save the cost inseparable from dealing through intermediaries.

During last session an Act amending the schedule to the Government Railways Classification was passed. I have since further reviewed the matter, and in accordance with the intimation given to the representations of the Railway staff last year propose to ask Parliament to further amend the schedule. The regulations under the Act have also been carefully considered and revised to bring them more closely into line with the regulations applicable to other branches of the Public Service so far as leave of absence and travelling-allowances are concerned. The amended regulations will be gazetted shortly, and in addition to other improvements will contain provision for the issues of a privilege ticket to a superannuated member of the Railway service and his wife once a month.

The regulations also contain provision under which members of the Second Division may qualify for transfer to the First Division if they elect to attend at stations in their own time or to utilize the opportunities that may be afforded them at other periods to acquire a knowledge of accounting and other duties appertaining to the First Division. I trust members of the Second Division will take advantage of the regulation which has been made with a view to giving greater scope for their advancement to positions in the First Division, it being fully recognized that men who have had practical experience in the Second Division and subsequently qualify themselves for promotion are as a rule decided acquisitions to the First Division.

The advent of road motor-vehicles has materially altered the conditions that existed in respect to railway-crossings when horses and bullocks provided the principal form of traction. The high rate of speed at which drivers of motor-vehicles drive over the public roads and dash over railway-crossings is a menace not only to the occupants of the cars, but to other persons who are using the road and to trains running on the railway. During the past year there have been a number of accidents on railway-crossings, some, unfortunately, attended with loss of life and severe personal injury to occupants of motor-cars driven on to crossings in the face of approaching trains. As the use of the motor-car extends, these risks will increase; and, with a view to providing additional safeguards, I have given instructions for the designing of automatic signals for use on railway level crossings. It is quite feasible to provide such appliances, and it is proposed to instal them on the busier crossings only at the outset, afterwards extending their use to additional crossings after practical experience has demonstrated the reliability and usefulness of the appliances. Automatic appliances of every kind are, however, liable to fail occasionally no matter what care and attention is bestowed on their upkeep. The interests of the State must be safeguarded in this respect before any expenditure is incurred in erecting automatic alarms. The necessary legislation will be introduced this session. In view of the indifference persons in charge of vehicles display when approaching railway-crossings, and their disregard of warning bells, sign-posts, and even the signals of crossing-keepers, more stringent measures will require to be adopted in the interests of public safety and heavier penalties be pressed for in future cases where breaches of the by-laws are committed.

During the year I have made investigation into the causes that are responsible for the percentage of working-expenses to earnings being so high, and find that the factors which in the main conduce to bring about the position are increased wages and shortening the hours of the staff, increasing train services by running trains for experimental development many of which are unremunerative, opening of new sections of railway in undeveloped country where business is necessarily very restricted and unprofitable, additional staff necessitated by the expansion of interlocking and safety appliances which has resulted in a large proportion of what were unattended flag stations being converted into tablet stations, many of which are double-manned on account of long hours. The more extended hours trains are now running on the Main Trunk systems also necessitates increased staff. The rates paid for fuel, stores, and materials of every description used by the Railway Department have advanced in sympathy with the improvement that has taken place in working-conditions and wages in foreign countries and foreign and local industries.

My research into this aspect of the railway question has revealed the fact that New Zealand is by no means singular in respect to the advance of percentage of operating expenses to earnings. Every large railway system shows the same upward tendency following on their general advance of wages and shortening of the hours of staff, the increase in price of coal and other materials, more lavish train services without increasing the tariff to bring in additional revenue to correspond with the advance in expenditure.

A comparison of the percentage of working-expenses in the railways of other Australian States, as shown in Table 15, if compared with the similar table of last year, will show that the working-expenses of all of these railways have increased with the exception of Tasmania, and in most cases the increases have been greater than those in New Zealand. New South Wales, for instance, increased from 61·09 in 1911 to 64·23 in 1912, and the latest report of the Commissioner gives the percentage as 68·82 in 1913. In other countries the same conditions occur, and the New Zealand percentage, though higher than I would like to see it, is not higher than that obtaining in other parts of the world. In the Canadian railways, for instance, the percentage for 1912 was 68·7, and in the United States railways 69·33, as against New Zealand 68·13.

The running of trains in excess of the immediate requirements for the purpose of developing the country and inducing settlement, thus creating a traffic that will ultimately be remunerative, is sound in principle as a business proposition. So long, therefore, as the close scrutiny that has in the past been kept on this and all other items of railway expenditure continues I am satisfied the best results will follow, and an advance in the rates of expenditure to earnings need be no cause for misgiving in so far as railway operations are concerned.

The effect increased train-mileage has on the financial results of working the railways is illustrated by the following figures relating to the North and South Island main lines and branches respectively. The North Island train-mileage was increased by 499,951 miles during the year, and the South Island main lines by 107,376 miles. The earnings per train-mile in the North Island declined from 8s. 4d. last year to 8s. 1½d., a decrease of 2½d. per train-mile, indicating that train services were in advance of the traffic. The earnings of the South Island lines advanced from 8s. 9¼d. to 9s. 2¾d., an increase of 5½d. per train-mile, indicating that traffic had more than kept pace with the increased train services.

The interest on capital earned by the North Island main line and branches receded from £4 19s. 7d. per cent. to £4 17s. 5d. per cent., while that earned by the South Island main line and branches advanced from £3 2s. per cent. to £3 8s. per cent.

I am of opinion that the time has arrived when it is desirable for the Railway Department to establish in each of the four principal centres a booking-office from which passengers may purchase, the day or the day before they intend to travel, a ticket for any journey they contemplate taking by railway.

I propose also arranging for the collection and delivery of parcels and passengers' luggage at each of the four centres, and for the conveyance of luggage between the ferry steamers and Wellington Railway-stations, also to inaugurate the system of "cash on delivery" parcels.

These arrangements will, I have no doubt, be a public convenience.

The accumulated balance to the credit of the Government Railways Superannuation Fund at the 31st March amounted to £264,455, an increase of £30,998 on the previous year. The total income for the year was £102,951, and the amount outgoing was £71,953. Of the latter the sum of £61,783 represented the charge involved in payments to 1,261 beneficiaries, comprising 807 members of the service who have either voluntarily resigned or who have been retired on account of being medically unfit, 179 widows and 275 children dependents of deceased members of the service who had not retired on superannuation at the time of their death.

As indicated in His Excellency the Governor's speech, Mr. E. H. Hiley was selected out of 104 applicants to fill the post of General Manager. Mr. Hiley will shortly arrive in the Dominion and will take up his duties. The thanks of the Dominion are due to the retiring General Manager for his long and faithful services.

As promised in last year's Statement a long and exhaustive investigation has been made into the question of shunting. Some valuable information has been received, which is now being gone into by the General Manager and the principal departmental officers. I hope shortly to lay a report on the subject before honourable members and to be able to take such steps as will minimize the danger to which shunters are subject.

The visit of the Battleship "New Zealand," though not falling altogether into last year's operations, caused great activity on the railways, and I think that the way in which the vast crowds travelling by rail were handled without a hitch reflects the greatest credit on the railway staff, both officers and men, and the thanks of the Dominion are due to them. I have personally to thank all the staff for their efforts on this occasion and also for their efforts on the occasion of the floods in the South Island.

The following statement shows a brief comparison of the traffic and the rolling-stock for dealing therewith when the Government resumed control of the railways in 1895 with that at 31st March of the present year:—

	31st March, 1895.	31st March, 1913.	Increase.	Per Cent of Increase.
Passengers (number) ...	3,905,578	13,123,879	9,218,301	236
Season tickets " ...	28,623	265,259	236,636	826
Parcels " ...	444,981	1,320,873	875,892	197
Horses " ...	11,185	21,971	10,786	96
Carriages " ...	750	2,904	2,154	287
Dogs " ...	23,517	57,388	33,871	144
Drays " ...	705	3,189	2,484	352
Cattle " ...	40,890	221,595	180,705	442
Sheep " ...	1,519,921	5,388,805	3,868,884	255
Pigs " ...	43,292	136,130	92,838	214
Chaff, lime (tons)	36,972	213,322	176,350	497
Wool "	103,328	147,735	44,407	43
Firewood "	85,102	112,072	26,970	32
Timber "	198,578	695,060	496,482	250
Grain "	388,556	1,181,899	793,343	204
Merchandise "	377,938	845,934	467,996	124
Minerals "	857,917	2,760,983	1,903,066	222
Total tonnage	2,048,391	5,957,005	3,908,614	191
Total revenue	£1,150,851	£3,971,002	£2,820,151	245
Locomotives (number) ...	269	513	244	91
" tractive power (lb.)	1,756,178	6,317,810	4,561,632	259
Passenger-cars (number) ...	498	1,282	784	158
Passenger-cars, seating-accommodation	17,455	53,819	36,364	208
Brake-vans (number) ...	204	385	181	88
Sheep-wagons " ...	390	1,443	1,053	270
Total wagons, all classes (number)	8,264	19,130	10,866	131
Wagon carrying-capacity (tons)	50,861	158,447	107,586	212
Train-mileage run... ...	3,221,620	9,016,224	5,794,604	180

Having given careful consideration to the general circumstances of the Dominion as reflected by the railway traffic, I feel confident of continued prosperity during the next financial year, and estimate the revenue for the year ending 31st March, 1914, at £4,200,000, and the expenditure at £2,931,250.

ANNUAL REPORT OF THE GENERAL MANAGER OF THE NEW ZEALAND GOVERNMENT RAILWAYS.

New Zealand Government Railways,
Head Office, Wellington, 30th August, 1913.

SIR,—

I have the honour to report upon the working of the open railways for the financial year ended the 31st March, 1913.

The capital cost has increased from £30,506,089 to £31,611,220. The revenue was £3,971,002, against £3,676,509. The expenditure for the year amounted to £2,705,609, against £2,465,896 last year. The rate of interest on the capital was £4 0s. 9d., as compared with £3 19s. 7d. for the preceding year. The revenue per train-mile was 8s. 9½d. and the expenditure, 5s. 11¾d., as compared with 8s. 9¼d. and 5s. 10½d. respectively last year.

The following extensions were opened during the year:—

	M.	ch.
Westport – Te Kuha	5	61
Waikohu–Otoko	7	79
Te Wera – Pohokura	8	51
Mina–Parnassus	8	51
Kiwi–Glenhope	12	45
Te Hana – Kaiwaka	8	67
	52	34

The mileage added to the system was thus 52 miles 34 chains, making the total mileage open for traffic on the 31st March, 1913, 2,860 miles 10 chains, as against 2,807 miles 56 chains at the close of the previous year.

During the year 13,123,879 passengers were carried, yielding a revenue of £1,314,340, and 265,259 season tickets were issued, the revenue derived therefrom amounting to £147,533. There was thus an increase of 1,232,745 ordinary passengers and £128,514 revenue, and 28,302 season tickets and £14,244 revenue over the traffic carried under these heads during the previous year. 72,763 children and teachers and 61,134 adults travelled by school and factory excursions during the year, the revenue derived therefrom amounting to £9,509. 964,695 passengers travelled at holiday excursion fares, yielding a revenue of £271,612.

The coaching and goods traffic has been well maintained during the year, and shows increases under all heads with the exception of sheep, pigs, and timber.

Increases.

Coaching.—Parcels, 129,966; horses, 1,461; carriages, 103; dogs, 1,232. Revenue, £11,875.

Goods.—Drays, 285; cattle and calves, 14,049 head; chaff, lime, &c., 21,528 tons; wool, 6,128 tons; firewood, 1,636 tons; grain, 232,343 tons; merchandise, 34,768 tons; minerals, 84,200 tons.

Decreases.

Goods.—Sheep, 65,638 head; pigs, 11,138 head; timber, 23,353 tons.

Several additions and alterations were made to the train services during the year to meet traffic requirements and to give greater facilities to the public. The train-mileage was 9,016,234, an increase of 644,537 miles. The increase on the North Island main line and branches was 499,951 miles, and on the South Island main line and branches 107,376 miles.

During the year floods and slips have caused serious delays to traffic, but the train services generally were well maintained. There was no serious train accident during the year, and no passengers were injured as the result of train accidents.

LOCOMOTIVE.

Mr. A. L. Beattie, Chief Mechanical Engineer, reports as follows:—

The engines, rolling-stock, plant, machinery, and appliances have been maintained in thoroughly efficient working-order, the details of work completed and in hand being as follows:—

Locomotives.—On the 1st April, 1912, there were 493 engines in service, and on the 31st March, 1913, there were 513 engines. Twenty new engines were added to stock. Of the new engines added to stock thirteen were built in the Government Railway workshops, and comprised five large tender engines, Class BA, and eight heavy tank engines, Class WG; seven Class AD, 72-ton tender engines, four-cylinder "*balanced compound*," were completed under the contract with Messrs. A. and G. Price (Limited), of Thames.

In the Government Railway workshops to date 110 engines have been built, and twenty-four old locomotives have been rebuilt to modern designs.

Six hundred and seventy-seven locomotives passed through the workshops during the year, the details being as follows :—

Particulars.	Number and Type.						Total.
	Four-cylinder "*Balanced-compound*" Tender Engines.	Tender Engines.	Tank Engines.	Fell Engines.	Fairlies. Single.	Fairlies. Double.	
Number passed through shops ...	63	228	344	6	31	5	677
Built new	...	5	8	...	...	...	13
Re-erected	...	...	11	...	...	...	11
Thoroughly overhauled	5	44	29	...	2	1	81
Heavy repairs	24	64	110	6	13	2	219
Light repairs	34	115	186	...	16	2	353
Painted and varnished	15	51	51	5	1	1	124
Touched up	16	89	50	...	13	...	168

Included in above are six engines for the Public Works Department and two engines for private railway companies.

At the close of the year there were under construction in the Railway workshops thirty-one locomotive engines, comprising one Class Ba tender engine, ten Class X 94-ton tender engines, four-cylinder "*balanced-compound*" type, and twenty heavy tank engines, Class Wg.

The contract entered into last year with Messrs. A. and G. Price (Limited), of Thames, to construct ten Class Ad 72-ton tender engines was increased to twenty engines. Of this number there were incomplete on the 31st March, 1913, thirteen engines, so that altogether there were in hand at the close of year forty-four locomotive engines.

The new locomotives added, together with boiler-renewals, increased the total tractive power by 341,434 lb., equal to 5·71 per cent. The new engines being built and boilers under construction will, when completed, still further largely augment the tractive power.

Boilers.—The work on new boilers, renewals, and boiler-repairs has been kept well up to date. Sixteen new locomotive-boilers were constructed. The following statement shows the details of boiler-work :—

Description.	Number passed through Shops.	Built new.	Heavy Repairs.	Light Repairs.	New Tubes (Sets).	Tubes pieced and Second-hand (Sets).	New Firebox.	New Firebox Tube-plates.	Boilers patched.
Boilers	361	16	145	200	110	19	6	15	133

Forty-three new boilers were under construction at the close of the year, comprising one Class D, three Class F, three Class J, five Class R, one Class Wf, twenty Class Wg, and ten Class X.

Carriages.—The car stock on the 1st April, 1912, consisted of 1,212 cars, and the number on the 31st March, 1913, was 1,282 cars. Seventy-seven new bogie cars were built and added to stock, and six old cars were written off and replaced; one old car was converted to a sleeping-van, and is being replaced with a new bogie car.

Satisfactory progress has been made with fitting second-class cars on long-distance trains with chair seats, also fitting platform gates, gangways, and additional handrails on all sections.

The following table shows the details of car-work during the year :—

Particulars.	Number and Type of Carriages.			Total.
	Bogie.	Six-wheel.	Four-wheel.	
Number passed through shops	1,864	91	36	1,991
Built new	77	...	...	77
Converted	1	...	1	2
Thoroughly overhauled	43	2	...	45
Heavy repairs	1,046	13	6	1,065
Light repairs	697	76	29	802
Painted and varnished...	561	6	...	567
Touched up and revarnished	441	10	8	459

One hundred and eight new bogie cars are under construction in Railway workshops.

Brake-vans.—The number of brake-vans on the line on the 1st April, 1912, was 381, and the number on the 31st March, 1913, was 385. Five new bogie brake-vans were built, four being additional stock and one to replace a van written off.

The repairs, &c., to brake-vans were as follows:—

Description.	Number passed through Shops.	Built new.	Heavy Repairs.	Light Repairs.	Painted.	Touched up.
Brake-vans	613	5	309	299	140	156

Twenty-seven bogie brake-vans are under construction.

Wagons.—The wagon stock on the 1st April, 1912, comprised 18,140 vehicles, and on the 31st March, 1913, the number was 19,130. Twenty-two old wagons were written off and replaced, twenty wagons were sold to the Public Works Department, and one old wagon was sold to a frozen-meat company, and these are being replaced. One thousand and thirty-two new wagons were built and added to stock. Of this number 1,010 wagons were additional stock, and the balance to replace stock written off; also one old car was converted to a sleeping-van.

The carrying-capacity of the wagon stock was increased by 9,734 tons, equal to 6·55 per cent., or an equivalent of 1,622 ordinary wagons.

The following table gives particulars of wagon-work during the year:—

Description.	Number passed through Shops.	Built new.	Converted.	Rebuilt.	Heavy Repairs.	Light Repairs.	Painted.	Touched up.
Wagons	19,249	1,032	34	38	5,195	12,950	3,936	5,595

One thousand five hundred and eighty-eight new wagons were under construction in Railway workshops at the close of the year, and these comprised 113 bogie and 1,475 four-wheel wagons.

Tarpaulins.—The stock of tarpaulins on the 1st April, 1912, was 13,955, and the number on the 31st March, 1913, was 15,222. One thousand two hundred and sixty-seven new tarpaulins were made and added to stock; 2,374 worn-out tarpaulins were written off and replaced with a similar number of new tarpaulins.

The following table gives details of the work on tarpaulins for the year:—

Description.	Number passed through Shops.	Manufactured new.	Condemned, and replaced with New Tarpaulins.	Repaired.
Tarpaulins	19,334	1,267	2,374	15,693

There were 2,035 new tarpaulins in hand at close of year.

Stationary Engines and Cranes.—The repairs and renewals were as follows:

Description.	Number passed through Shops.	Built new.	Converted.	Heavy Repairs.	Light Repairs.	Painted.	Touched up.	Boiler-repairs.			
								Heavy Repairs.	Light Repairs.	New Tubes (Sets).	Boilers patched.
Hand-cranes	28	...	1	9	18	3	5	...	...	...	...
Steam-cranes	49	...	...	15	34	6	7	...	5	...	...
Stationary engines	27	...	...	...	1	...	...	9	18	6	8
Pile-drivers and hoisting-engines ...	9	...	...	...	9	...	...	1	1	1	1
Pneumatic cranes	4	2	...	...	2	2	...	...	...	...	...

Axles.—During the year 2,182 car, van, and wagon axles were replaced with modern steel axles; this number does not include new stock. The replacement of old iron axles with modern steel axles is now practically completed. The steel axles increase the carrying-capacity of wagons by 2 tons.

Westinghouse Brake.—All new engines and rolling-stock built for North and South Island Main Lines and Branches are equipped with the quick-acting Westinghouse brake before being placed in service. Efficient arrangements are in force for the examination and upkeep of the Westinghouse brake. The work of equipping the engines and rolling-stock on Whangarei and Gisborne Sections with the Westinghouse brake has been put in hand.

Car-lighting.—The oil-gas manufactured at the five separate Pintsch gas works amounted to 9,994,930 cubic feet, costing 2s. 1·31d. per 100 cubic feet. The rise in cost was due to the increased price paid for oil.

On sections not provided with Pintsch gas cars are lighted with acetylene gas, and practically all the cars on the isolated sections are now supplied with this system of lighting.

Motor-cars, Culverden–Hanmer.—Cars in service have been kept in good and efficient working-order.

Steamers.—The Railway Department's steamers on Lake Wakatipu have been maintained in good order. A new steamer was completed and put into commission during the year.

Re-tareing Wagons.—Whenever wagons are in workshops for repairs the tare weight is checked and adjusted before the wagon goes into service again; also, at intervals not exceeding twelve months, the tare weight of all goods-wagons in service is checked and adjusted.

Sheep-wagons.—The work of fitting grated floors to all the older wagons is now completed. All new live-stock wagons are built with grated floors. These grated floors are found to be of great assistance in carrying live-stock in good condition.

Renewals and Replacements.—During the year under review six old cars, one brake-van, twenty-two wagons, and 2,374 worn-out tarpaulins were written off and replaced with six new cars, one new brake-van, twenty-two new wagons, and 2,374 new tarpaulins. In accordance with the practice of the Department the cost of the new cars, brake-van, wagons, and tarpaulins was debited to working-expenses.

Seven new bogie cars are in hand (cost debited to working-expenses) for replacing old cars sold, and old cars which will be written off when the new cars are completed.

Train Running and Mileage.—There has again been an increase in train-mileage. Compared with 1911–12 the increase in 1912–13 is 644,537 train-miles, or equal to 7·7 per cent., and 779,847 engine-miles, being equal to 6·9 per cent.

The following table shows particulars of the expenditure per train-mile:—

Year.	Train-mileage.	Engine-mileage.	Cost, in Pence, per Train-mile.		
			Locomotive Branch.	Car and Wagon Branch.	Total.
1912–13	9,016,224	12,089,925	22·18	6·02	28·20
1911–12	8,371,687	11,310,078	21·32	5·99	27·81

The increased cost per train-mile has been mainly caused by the extra cost of fuel and wages.

MAINTENANCE.

Mr. J. Burnett, Chief Engineer, reports as follows:—

Permanent-way.—The track has been maintained in good condition. The following relaying has been done during the financial year:—

	Miles.
Main lines, 53 lb. and 56 lb. relaid with 70 lb. steel material	83½
Branch lines, 40 lb. relaid with second-hand 53 lb., &c., steel material removed from main lines	20
Branch lines, 40 lb. relaid with new 55 lb. steel material	¾
Total relaying for the year	104¼

Short supplies of sleepers prevented a greater length being done.

Between 125½ m. and 126½ m., Wanganui district, near Turakina, an improvement of the alignment from minimum 6-chain to 15-chain curves, preparatory to relaying, has been put in hand as a charge to working-expenses.

The work of fitting sharp curves with check-rails to lessen the wear on outer rail has been continued.

Sleepers.—235,378 sleepers were put into the track during the year. Respacing to provide the standard number of sleepers to strengthen the track has been gone on with so far as the supply permitted.

Slips and Floods.—Traffic on the North Island Main Trunk was twice interrupted by slips in the Ohakune district, where, in two places, deviations of the line had to be made. In such country there is great liability to interruptions by slips.

A heavy storm did some damage to the sea-wall between Kaiwarra and Petone.

In the South Island heavy rains were experienced in July and November, 1912, and in March of this year, causing delays to traffic. In the latter month exceptionally heavy floods did considerable damage to the main line and all branches (except the Tapanui, which was not damaged) in the Invercargill district. The North Rangitata Bridge in Canterbury was also damaged, being blocked for traffic for three days, until repairs were effected.

The district staffs concerned met these unusual difficulties in a creditable manner.

Ballasting.—Ballast to the amount of about 290,000 cubic yards was used on the track during the year. This is less than the average yearly quantity used during the previous five years. Scarcity of labour accounted for this decrease.

A steam navvy is being used for loading ballast in Invercargill district, and a Quertier excavator in the Wellington district. The provision of further mechanical loading plants is under consideration.

A second crushing plant is being installed in the quarry at Te Kuiti, and a crushing plant at Mount Albert, Auckland.

Bridges, &c.—Bridge structures have been maintained in a safe condition. The renewal of timber superstructures in steel has been continued. Where desirable, the alignment has been improved when rebuilding bridges.

New steel-girder bridges over the New North Road, Morningside, and Park Road (Auckland), and new steel viaduct at Manawapou (Wanganui district), are in hand.

Fences.—A good deal of work has been done in the way of enclosing the line, about 48½ miles of fences having been erected on the Manawatu line alone.

Locomotive Water-services.—Improvements have been made at a number of stations.

Wharves.—New ferro-concrete wharf at Picton completed. Additions to the Lake Wakatipu wharves have been completed, and a patent slip is being constructed. Heavy repairs to Port Chalmers wharves are in hand.

Buildings.—New engine-depots are in course of construction at Newmarket and Linwood (Christchurch).

The maintenance-works depot at Newmarket is being shifted to Penrose, to make room for the new engine-depot. The removal of maintenance-works depots to Kaiwarra and Addington has been completed.

Social halls for the use of employees have been provided at Auckland, Ohakune, and Marton. Bathrooms and other additions have been supplied at a large number of cottages.

Albert Bond building at Christchurch, recently purchased by the Department, is being converted to offices for district staffs.

Miscellaneous Works.—Additions and improvements were carried out during the year amounting to £26,101, which was charged to working-expenses. The principal works were: Additions and improvements at Whangarei, Helensville, Remuera, Ohinewai, Kiwitahi, Matamata, Ohakune, Ball Road, Pahiatua, Carterton, Thorndon, Lambton, Christchurch, Temuka, Timaru, Glenavy, Ladbrooks (part), Waimate, Allanton, Ocean Beach, Dipton, and Balfour ; new station building at Henderson ; additions to houses at Mount Eden, Tirau, Bennett's, Chertsey, Oxford East, and Tapui ; new houses at Dargaville, Utiku, and Springfield ; social halls at Frankton (part), Ohakune (part), and Marton ; erection of verandas at Halcombe, Rolleston, and Waipara ; new goods-sheds at Waikumete and Motumaoho ; additions to goods-sheds at Runciman, Bonny Glen, and Hawarden ; fire-break walls in goods-sheds at New Plymouth, Westport, Christchurch, Timaru, Oamaru, and Invercargill ; new stockyards and improvements at Eureka, Methven, Otamita, and Glenorchy ; additions to water-services at Hikurangi, Helensville, Mercer (part), Ohau, Thorndon, and Invercargill ; erection of weigh-bridges at Helensville, Morrinsville, Te Aroha, and Granity ; erection of turntables at Waipahi, Gore, Heriot, Tokanui, and Hedgehope ; Dunedin, trial well at engine-depot (completion) ; drainage improvements at Whangarei, Pelichet Bay, and Dunedin ; workshops improvements at Whangarei, Napier (part), Petone, and Addington ; refreshment-rooms at Paekakariki (completion) and Cass (part) ; Otira, passenger-shelter ; Paekakariki, new engine-depot (part) ; Auckland, extension of Pintsch-gas works (completion) ; Arahura, fencing-line ; Frankton and Balclutha, improved coal-storage ; deviation of line at Mercer (completion) and Bonny Glen – Turakina (part) ; erection of cranes at Taumarunui and Waikari ; land for ballast-pits at Te Awamutu and Glasnevin ; purchase of land, Otahuhu ; foot-warmer furnaces at Upper Hutt, Ward, and Picton ; additions to library at Petone and Hillside ; Invercargill, fire-prevention water-service ; Taumarunui, storeroom and goods-offices ; Lyttelton, purchase of New Zealand Shipping Company's buildings ; Lyttelton, lighting grain-shed ; Ohakune, lighting with acetylene.

Additions to Open Lines.—£164,577 was spent on these works and charged to capital, the principal items being the following : Signalling, interlocking, block-working, &c. ; additions to station buildings, yards, and sidings, at Whangarei, Motatau (part), Helensville, Pokapu, Taita, Auckland (completion), Auckland (Quay Street) (completion), Mercer (part), Otahuhu, Huntly (part), Taupiri, Mount Eden (completion), Mount Albert, Frankton, Morrinsville (completion), Paeroa, Te Kumi, Te Kuiti (completion), Poro-o-tarao, Taumarunui, Eltham (completion), Napier, Waipawa (part), Waipukurau (part), Pukerua, Plimmerton, Tawa Flat, Thorndon, Picton (part), Ikamatua (completion), Heathcote, Christchurch (part), Leeston, Waddington, Coalgate, Lincoln, Hinds, Dunsandel (completion), Mataura (part), Timaru (part), Dunedin, Stirling (part), and Invercargill (part).

Miscellaneous.—Additions to water-services at Ngaruawahia, Henderson (part), Morrinsville, Otahuhu (part), and Tokomaru ; new houses at Waikumete, Frankton, Springfield, Duntroon, and Glenham ; purchase of land at Ngaruawahia, Huntly, Hawera, Stratford, Napier, and Gore ; additions to workshops at Whangarei, Newmarket (part), Petone, and Addington ; extension of platforms at Te Kumi and Hamilton ; extension of verandahs at Napier, Palmerston North (completion), Thorndon, Lambton, Oxford East, and Gore (part) ; additions to goods-sheds at Auckland, Kawa, Christchurch, Timaru, and Invercargill (part); grade-improvements, Auckland–Mercer; fencing, Glenavy; weighbridges, Port Ahuriri (part) and Onehunga; turntables at Rangiora, Port Chalmers, and Mosgiel; subways at 27¾ m. North Island Main Trunk, Dannevirke (completion), and Manakau; stockyards at Hukerenui, Mangapeehi (part), Erua, Pukerua, and Hawarden; reclamations, Mechanics Bay (part) and Bluff (part); overbridges at Newmarket (part), Morningside (part), and Gore; cranes for goods-shed, Auckland (completion); crane, Hawera (part); State collieries, approach-road; Picton, new wharf (part); Lake Wakatipu, wharf-extension (completion); Nelson, wharf-extension (part); Lake Wakatipu, slipway (part); additions to Pintsch-gas works at Wellington, Christchurch, and Dunedin; Ngawapurua, fire-service (Manawatu Bridge); additions to District Offices, Wanganui; new District Offices, Christchurch (part); doubling line, Westfield–Otahuhu; engine-depots at Newmarket (part), Paekakariki, Linwood (part), and Dunedin (completion); engine-shed extensions, Bluff; wagon-repair shed, Taumarunui (part); Wellington, culvert (Waterloo Quay) (completion); Otahuhu, ramps to overbridge; electric lighting at Addington shops and Hillside; Mount Albert, stone-crusher (part); Christchurch, concrete-mixer.

Doubling and Improvement of Lines.—Dunedin–Mosgiel: A further distance of about three-quarters of a mile to Abbot's Creek has been opened for double-line working. The Chain Hills Tunnel has been pushed on steadily. Bad ground has been met, but indications are now more favourable. There is a length of about 15 chains to complete this tunnel.

Maintenance of the new Hutt Road is still in the Department's hands, and is being charged against the construction authority.

Grade-improvements.—A sum of £33,031 has been spent during the year on the grade-easements on the North Island Main Trunk line. The improvements between Buckland and Tuakau and at Pukekohe, including new station-yard and station at Pukekohe, have been completed, and the Tuakau–Pokeno easements are now in hand.

The earthworks for improvements at the Manawapou (Wanganui district) Viaduct have been finished as far as possible till the viaduct now being erected is completed.

Reclamation, Mechanics Bay, Auckland.—£11,089 has been paid for reclamation carried out by the Auckland Harbour Board under agreement with that body.

The provision of new stations and station-yards at Wellington and Auckland, and of large additions at Palmerston North, Lyttelton, Christchurch, Timaru, and Invercargill, is becoming a matter of urgency as the traffic is rapidly outgrowing the capacity of the existing accommodation.

It is probable that further duplications will be necessary in the near future.

Expenditure.—The cost of maintenance was £765,860, equal to about £270 per mile of railway maintained. In addition a sum of £222,501 was spent on new works and works chargeable to other Government Departments, public bodies, and private parties, making the total expenditure of my branch for the year £988,361. The increase in maintenance working-expenses was mainly caused by the higher rate of wages paid to the workmen, amounting to over £10 per man.

Mileage.—The mileage open for traffic on the 31st March, 1913, was 2,860 miles 10 chains. Opened during the year, 52 miles 34 chains.

Lands and Leases.—The figures for this branch are as under:—Leases: Number of leases registered during year, 739; aggregate annual rental of same, £9,580; total number of leases current at 31st March, 1913, 4,359; aggregate annual rental of same, £32,660. Sidings: Number of siding agreements registered during year, 34; aggregate annual rental of same, £525; total number of siding agreements current at 31st March, 1913, 356; aggregate annual rental of same, £7,082. Land: Total number of Proclamations issued taking or giving up land, 67; total amount of compensation paid during year for land taken, £16,615.

Staff.—Maintenance working staff, 4,223 men; office staff, 128 men: total, 4,351 men.

SIGNAL AND ELECTRICAL.

During the past year thirteen stations have been fitted with fixed semaphore signals, viz.: Coalgate, Linton, Marakeke, Otoko, Porewa, Pokako, Kakahi, Okahukara, Waimiha, Hangatiki, Kawa, Rangiriri, Hikurangi.

Total number of officered stations (including tablet stations)	455
Equipped with fixed signals	228
Interlocked	79
Unequipped	148

Interlocking of Points and Signals.

The electro-pneumatic installation at Dunedin has worked satisfactorily.

The following places have been signalled and interlocked: Gore, Abbot's Creek, Black Jack's Point, Fendalton tram-crossing, Paeroa, Pokeno grade-easement crossing, Otahuhu, Westfield.

The interlocking has been added to and rearranged at Abbotsford, Pukerua, Christchurch, Thorndon, Taihape, and Remuera.

The following sidings have been interlocked with the tablet system: Te Kuha Branch Junction, Westport; Pokeno service siding, at 40 m. 18 ch.; Whangarata service siding, at 36 m. 73 ch.; Gilmer and McGuire's siding, near Lower Hutt; May Morn Estate siding, near Mangaroa; Auckland Brick Company's siding, Avondale. The interlocking at Taumarunui and Ohakune is in hand.

Total stations now interlocked, 79; tramway crossings interlocked, 6; intermediate sidings interlocked with tablet, 22.

Expenditure for the year was—New works, £10,910 17s. 1d.; maintenance, £7,183 16s. 3d.

Block Working (Electric Tablet).

During the year eighty-two tablet instruments and 115 miles of line have been fitted and brought into operation, embracing the following sections: Waipukurau to Napier, Greymouth to Dunollie, Henderson to Kaukapakapa, Morrinsville to Putaruru. Waikumete, Pokako, Kakahi, Porewa, Hangatiki, Marakeke, Okahukara, Linton Ballast-pit, have also been installed as tablet stations. The equipment of the section Putaruru to Rotorua is in progress.

Total mileage now equipped with tablet apparatus, 1,504 miles, single line.

Electric tablet instruments now in use, 790, at 334 stations.

The automatic tablet-exchanging apparatus has been installed at twenty-seven additional stations. The total now in use is 304.

Lock and Block.

The electric lock-and-block system for double-line working has been brought into operation between Abbotsford and Abbot's Creek.

Mileage of line open for traffic: Double line, 39½ miles; single line, 2,820 miles, 50 chains.

Total mileage now equipped with lock-and-block apparatus, 39½ miles, double line.

Electric lock-and-block instruments now in use, 76, at 35 stations.

Telegraph and Telephone Facilities.

Four hundred and ninety-three miles of wire and 199 miles of poles have been erected and brought into use, also various alterations and additions have been made to improve existing lines.

One hundred and four telephones have been fixed and brought into operation, twenty-nine additional and twelve extension connections have been made with the public telephone exchanges, and two Morse connections and thirty-eight electric bells have been brought into use. A number of old-pattern telephones have been replaced by new and modern ones. Totals now in use: Morse sets, 232; telephones, 1,315; electric bells, 193; miles wire, 6,133; miles poles, 2,295.

The work on the following lines is in progress: Frankton–Rotorua, Morse line; Putaruru–Rotorua, telephone line; Belgrove–Tadmor, telephone line. Greater facilities are still needed in some districts to meet the more pressing requirements.

Electric Lighting and Power Working.

Electric light has been installed in the signals at Gore, Lyttelton grain-shed, Kakahi Sawmill, Auckland new goods-shed, Hillside Workshops, and additional lighting at Petone and Addington Workshops and Dunedin engine-sheds.

The installation of additional lighting at Mataura Station and lighting of new Railway Offices, Christchurch, is in hand.

The expenditure on electric-block working, telegraph and telephone facilities, and electric lighting for the year was:—

	£	s.	d.
New works—			
Electric tablet-working	10,126	6	2
Electric lock and block	82	2	7
Telephone and telegraph lines	3,746	3	5
Electric light	1,206	19	7
	£15.161	11	9

	£	s.	d.
Maintenance—			
Electric block-working and telegraph and telephone lines ..	9,806	9	4
Lines, &c., maintained by Post and Telegraph Department ..	2,917	0	6
Electric light	2,039	8	4
	£14,762	18	2
Public telephone-exchange connections	£2,403	15	0

The electrical work in connection with the installation of a number of motors for driving machines at Hillside, Addington, and Petone has been carried out.

TRAFFIC.

Mr. H. Buxton, Chief Traffic Manager, reports as follows:—

Whangarei–Kawakawa Section.

Revenue, £41,410; increase, £4,947.

The principal increases were in passengers and timber. Chaff, grain, and merchandise also improved, but minerals decreased slightly.

Kaihu Section.

Revenue, £4,702 ; increase, £678.

The increases were chiefly in passengers, flax, grain, and minerals.

Gisborne Section.

Revenue, £18,523 ; increase, £2,025.

Nine miles additional were opened for traffic during the year.

There was a general improvement in all classes of traffic. The increase of goods traffic totalled 500 tons.

North Island Main Line and Branches.

Revenue, £2,035,997 ; increase, £158,387.

The principal items of traffic were :—

	Number.		Number.
Passengers	6,931,522 ;	increase,	789,100
Season tickets	165,886 ;	,,	18,249
Parcels, &c.	636,835 ;	,,	60,274
Live-stock	2,732,603 ;	decrease,	99,995
	Tons.		Tons.
Goods	1,779,005 ;	increase,	109,754

The annual revenue per mile of railway rose from £1,746 12s. 2d. last year to £1,884 3s. 5d. for year under review, but per train-mile it decreased from 8s. 4d. to 8s. 1½d.

The variations of traffic in the different districts were approximately as follows :—

Auckland District.—Revenue, £849,226 ; increase, £88,884.

Passengers increased by 468,000, chiefly at Auckland and adjoining stations, and at Frankton Junction.

Season tickets increased by 10,513.

Parcels increased by 36,920, the increase being distributed throughout the district.

Live-stock traffic shows an increase of 40,600 ; sheep, 27,500 ; and cattle, 7,800.

Goods traffic shows a general improvement. Timber increased by 6,662,000 ft., wool by 2,508 bales, chaff by 9,552 tons, grain by 540 tons, merchandise by 10,740 tons, and minerals by 3,806 tons.

Wanganui District.—Revenue, £432,535 ; increase, £22,984.

Passengers increased by 54,686, and parcels by 6,092.

Live-stock : Cattle increased by 3,473, calves by 3,638, sheep by 32,397 ; but there was a decrease of 7,455 pigs.

The tonnage carried of chaff, wool, grain, and merchandise shows an increase ; but firewood, timber, and minerals show a drop of about 7,000 tons.

There was an increase of 6,500 tons in the export of dairy-produce.

Wellington District.—Revenue, £754,236 ; increase, £46,519.

Passengers show an increase of 266,142, distributed over the district.

Season tickets increased by 6,898, and parcels by 15,892. There was an increase of 1,149 calves, but cattle and sheep declined ; sheep by 169,000, in consequence of the strike of slaughtermen at the freezing-works.

There was a large increase in tonnage, the items being : chaff, &c., 2,808 tons ; wool, 1,103 tons ; firewood, 2,808 tons ; grain, 12,682 tons ; merchandise, 9,248 tons ; and minerals, 31,661 tons. Timber decreased by about 8,000 tons, chiefly on account of the exhaustion of local milling-areas.

Picton Section.

Revenue, £31,392 ; increase, £2,266.

Increases are noticeable in passengers, chaff, &c., grain, merchandise, and minerals, and decreases in live-stock, wool, firewood, and timber. Sheep dropped 20,000 owing to the stoppage of the freezing-works in consequence of labour trouble.

Nelson Section.

Revenue, £29,147 ; increase, £4,121.

Thirteen miles additional were opened for traffic on the 2nd September.

The increase of business was general, though the tonnage of timber fell off slightly.

Westport Section.

Revenue, £124,476 ; increase, £6,423.

The only large increase was in coal, 32,879 tons, though there was an improvement in other classes of traffic.

Westland Section.

Revenue, £144,723 ; decrease, £6,479.

Most classes of traffic show decreases, the most noticeable being 15.696 tons of timber and 9.923 tons of coal.

South Island Main Line and Branches.

Revenue, £1,533,611 ; increase, £121,774.

The principal items were :—

	Number.		Number.
Passengers	5,090,256 ;	increase,	381,846
Season tickets	92,409 ;	,,	10,872
Parcels, &c.	684,827 ;	,,	65,100
Live-stock	2,799,161 ;	,,	51,075
	Tons.		Tons.
Goods	2,470,658 ;	increase,	221,421

The annual revenue per mile of railway rose from £1,043 5s. last year to £1,125 16s. 10d. for the year under review, and per train-mile from 8s. 9¼d. to 9s. 2¾d.

The variations of traffic in the different districts were approximately as follows :—

Christchurch District.—Revenue, £684,104 ; increase, £69,175.

Passengers increased by 171,480. The increase was general, but was largest at Lyttelton, Christchurch, and Ashburton.

Season tickets increased by 5,301.

Parcels increased by 32,000, the largest increase being at Christchurch.

There was an increase of 65,000 sheep, but cattle and pigs decreased slightly.

Wool increased by 3,216 tons, grain by 121,667 tons, merchandise by 10,057 tons, and minerals by 25,443 tons. Chaff, &c., decreased by 1.272 tons ; and timber by 20,301 tons, chiefly water-borne timber at Lyttelton.

The 1912 grain crop was exceptionally heavy, and the season later than usual.

Dunedin District.—Revenue, £492,118 ; increase, £37,464.

Passengers increased by 139,000, season tickets by 4,712, and parcels by 23,547.

Sheep increased by 108,000, wool by 10,877 bales, and grain by 61,987 tons.

Chaff, &c., decreased by 304 tons, firewood by 6,450 tons, merchandise by 41 tons, and minerals by 5,919 tons.

Invercargill District.—Revenue, £357,389 ; increase, £15,135.

Passengers show an increase of 71,247 ; season tickets, 859 ; and parcels, 8,440.

Cattle show a slight increase ; but sheep decreased by 114,307, in consequence of the absence of the usual demand from Canterbury.

Grain increased by 22.813 tons, and minerals by 17.269 tons : but chaff, wool, and timber declined.

Lake Wakatipu Steamers.

Revenue, £7,021 ; increase, £352.

Passengers, parcels, and live-stock show increases, but there were decreases in some other classes.

Average Late Arrival of Trains, Year ended 31st March, 1913.

—	Period ending													Average for Year, in Minutes.
	Apr. 27.	May 25.	June 22.	July 20.	Aug. 17.	Sept. 14.	Oct. 12.	Nov 9.	Dec. 7.	Jan. 4.	Feb. 1.	Mar. 1.	Mar. 31.	
Express and Mail Trains.														
Year ending 31st March, 1913	4·60	2·01	3·28	1·00	0·88	0·57	0·69	1·04	0·76	2·44	1·21	0·92	2·40	1·67
Year ending 31st March, 1912	6·48	2·96	2·65	2·47	1·66	0·68	1·05	1·01	0·84	3·45	1·95	2·14	1·65	2·23
Long-distance Mixed Trains.														
Year ending 31st March, 1913	5·52	3·65	3·35	1·46	1·17	1·34	1·30	1·71	1·89	2·94	2·52	2·64	4·14	2·58
Year ending 31st March, 1912	4·52	3·18	2·85	2·53	2·19	1·84	1·88	2·15	2·49	4·05	3·54	4·29	3·45	2·99
Suburban Trains.														
Year ending 31st March, 1913	0·76	0·60	0·93	0·54	0·42	0·27	0·29	0·57	0·32	0·77	0·55	0·65	0·62	0·56
Year ending 31st March, 1912	0·81	0·63	0·68	0·44	0·30	0·21	0.58	0·34	0·30	0·68	0·59	0·66	0·64	0·52

STORES.

Mr. H. Baxter, Comptroller of Stores, reports as follows :—

The value of stores (purchased under the Railway vote) on hand at 31st March, 1913, at the various stores and depots amounted to £328,754 18s. 2d., as against £250,764 8s. 9d. on the 31st March, 1912, an increase of £77,990 9s. 5d.

The value of stores stock on hand on account of additions to open lines amounted to £37,801 16s. 6d., as against £17,266 18s. 5d. on 31st March, 1912, an increase of £20,534 18s. 1d.

The total stock of stores on hand has therefore increased during the year by £98,525 7s. 6d.

The whole stock is in good order, has been carefully and systematically inspected, and is good value for the amounts stated.

The conduct of the staff as a whole has been very satisfactory.

I have, &c.,
T. RONAYNE,
General Manager.

The Hon. the Minister of Railways.

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RETURN No. 1.

GENERAL REVENUE ACCOUNT for the Year ended 31st March, 1913.

Dr.	£	s.	d.
To **Cash in hand, freights, &c.,** outstanding at stations, **1st April, 1912**	76,340	6	6
Revenue from passenger, parcels, and goods traffic, as per Return No. 5 ...	3,971,001	18	9
	£4,047,342	5	3
To Net payment to Public Account	3,964,831	1	10
Less Cash in hand, freights, &c., outstanding at stations, 1st April, 1912, as above	76,340	6	6
	3,888,490	15	4
Cash in hand, freights, &c., outstanding at stations, 31st March, 1913, as above...	82,511	3	5
	£3,971,001	18	9

Cr.	£	s.	d.	£	s.	d.
By Gross payment to Public Account	4,188,835	12	8			
Less Collections for refund	224,004	10	10			
				*3,964,831	1	10
Cash in hand, freights, &c., outstanding at stations, 31st March, 1913				82,511	3	5
				£4,047,342	5	3
By Working-expenses, as per Return No. 4				2,705,609	3	6
Balance—Net earnings, available for interest				1,265,392	15	3
* Receipts as per Treasury accounts	£3,968,349	12	5			
Balance Refund Account, 31st March, 1912, as below	13,694	5	10			
	3,982,043	18	3			
Balance Refund Account, 31st March, 1913, as below	17,212	16	5			
	£3,964,831	1	10			
				£3,971,001	18	9

Collections for Refund to Harbour Boards, Shipping Companies, Carriers, &c., for the Year ended 31st March, 1913.

Dr.	£	s.	d.
To Balance brought forward, 1st April, 1912	13,694	5	10
Collections for refund	224,004	10	10
	£237,698	16	8

Cr.	£	s.	d.
By Treasury payments	220,486	0	3
Balance, 31st March, 1913, carried forward	17,212	16	5
	£237,698	16	8

H. Davidson, Chief Accountant.

RETURN No. 2.

GENERAL EXPENDITURE ACCOUNT for the Year ended 31st March, 1913.

Dr.	£ s. d.
To Balance brought forward :—	
Accounts due to the Department outstanding at 1st April, 1912, for stores, work done, &c.	26,427 11 9
Stock of stores on hand at 1st April, 1912	250,764 8 9
Payments per Treasury Vote 16*	3,203,108 8 9
Liabilities outstanding at 31st March, 1913, carried forward—	
Wages and supplies for March paid from Treasury in April	150,514 6 2
	£3,630,814 15 5

Cr.	£ s. d.	£ s. d.
By Liabilities outstanding at 31st March, 1912, brought forward		172,451 1 0
Classified expenditure, as per Return No. 4		2,705,609 3 6
Recoveries to credit of Vote 16,*—		
Other Government Departments, and personal accounts, for stores, work done, &c.	337,172 6 8	
Miscellaneous recoveries	48,795 4 6	
		385,967 11 2
Balance,—		
Accounts due to the Department outstanding at 31st March, 1913, for stores, work done, &c.		38,032 11 7
Stock of stores in hand at 31st March, 1913		328,754 18 2
		£3,630,814 15 5

H. Davidson, Chief Accountant.

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* **Payments per Treasury**	...	£3,203,108 8 9
Recoveries	"	385,967 11 2
Net charge to Vote	...	£2,817,140 17 7

Wagons.	Traffic.	Head Office.	Departmental Offices.	Lake Wakatipu Steamers.	Total.
£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
954 5 10	5,913 6 9	344 8 8	823 15 1	..	22,576 16 10
235 7 3	1,067 4 10	38 13 11	281 12 4	..	3,827 6 9
270 16 10	2,115 9 2	152 8 0	564 18 6	..	9,532 18 4
37,324 13 0	310,589 18 7	16,857 9 11	33,477 7 5	..	903,990 6 4
29,895 1 10	292,402 18 3	12,689 0 7	25,522 2 10	..	751,376 1 5
3,771 7 8	22,775 4 5	1,209 14 4	3,637 5 7	..	72,068 8 1
4,644 2 5	15,517 14 11	1,049 0 6	2,724 11 2	..	40,131 14 2
257 7 7	7,405 10 7	241 9 5	779 0 1	..	17,824 7 7
428 13 3	5,473 5 6	258 12 1	793 19 11	..	19,980 6 0
..	..	..	..	4,951 12 3	4,951 12 3
77,781 15 8	663,260 13 0	32,840 17 5	68,604 12 11	4.951 12 3	1,846,259 17 9
1,659 7 0	525 14 11	27 2 10	9 6 10	..	6,615 13 3
83 7 8	88 13 10	3 0 6	1 0 2	..	980 17 7
132 17 8	194 12 5	12 0 11	3 19 1	..	2,802 8 2
18,411 14 5	26,962 11 5	1,315 4 11	450 5 8	..	423,884 2 5
16,874 15 2	19,992 15 3	998 6 2	345 12 10	..	282.037 17 11
1,549 8 0	1,843 12 7	94 5 0	32 17 5	..	17,920 13 2
3,447 14 11	1,175 16 3	80 5 9	29 2 1	..	11,813 0 10
143 4 11	685 18 1	19 3 2	6 10 2	..	3,909 4 6
301 5 11	295 5 4	21 9 3	6 19 6	..	6,393 15 8
..	..	..	..	1,541 1 8	1,541 1 8
42,603 15 8	51,765 0 1	2,570 18 6	885 13 9	1,541 1 8	757.898 15 2
482 3 6	359 7 2	..	..	..	1.551 2 8
14 5 7	22 9 6	..	..	..	52 12 11
36 5 9	224 8 4	..	..	..	411 12 2
7,298 6 8	23,474 5 3	..	..	..	52.634 3 9
3,944 10 7	22,837 8 9	..	..	..	35,705 15 0
563 9 5	2,921 19 2	..	..	..	4,394 19 5
1,071 17 10	2,865 2 3	..	..	..	4,728 10 2
67 10 9	671 8 2	..	..	..	1,041 17 3
61 15 4	534 6 2	..	..	..	804 2 10
..	..	..	..	125 14 5	125 14 5
13,540 5 5	53,910 14 9	..	..	125 14 5	101.450 10 7
133,925 16 9	768,936 7 10	35.411 15 11	69,490 6 8	6.618 8 4	2,705.609 3 6

H. Davidson, Chief Accountant.

RETURN No. 3.

CLASSIFIED EXPENDITURE for the Year ended 31st March, 1913.

Section.	Maintenance of Way and Works.						Locomotive Power.						Carriages.	Wagons.	Traffic.	Head Office.	Departmental Offices.	Lake Wakatipu Steamers.	Total.
	Permanent-way.	Structures.	Buildings.	Miscellaneous.	General Charges.	Total.	Working Locomotive.	Fuel and Water.	Oil, Tallow, &c.	Renewals and Repairs.	General Charges.	Total.							
	WAGES AND SERVICES.																		
	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
Whangarei–Kawakawa	5,001 18 3	2,407 14 1	1,148 2 3	991 9 1		9,549 3 8	3,133 0 8	297 11 11		1,057 9 1		4,488 1 8	503 15 2	954 5 10	5,913 6 9	344 8 8	823 15 1	..	22,576 16 10
Kaihu	1,134 1 4	116 10 11	23 15 11	2 2 9		1,276 10 11	550 8 5	45 17 11		166 10 9		762 17 1	165 0 5	235 7 3	1,067 4 10	38 13 11	281 12 4	..	3,827 6 9
Gisborne	2,622 11 3	618 4 4	296 14 11	127 19 0		3,665 9 6	1,735 5 9	25 9 3		698 6 10		2,459 1 10	304 14 6	270 16 10	2,115 9 2	152 8 0	564 18 6	..	9,532 18 4
North Island Main Lines and Branches	143,563 4 7	62,151 9 5	28,704 19 5	7,385 5 5		241,804 18 10	154,040 2 7	19,656 12 10		60,880 8 2		234,577 3 7	29,358 15 0	37,324 13 0	310,589 18 7	16,857 9 11	33,477 7 5	..	903,990 6 4
South Island Main Lines and Branches	134,881 3 8	39,090 8 0	26,289 4 4	5,535 7 6		205,796 3 6	112,714 5 9	14,895 3 2		40,093 16 0		167,703 4 11	17,367 9 6	29,895 1 10	292,402 18 3	12,689 0 7	25,522 2 10	..	751,376 1 5
Westland	17,419 15 5	5,603 8 8	2,242 14 11	288 15 10		25,554 14 10	9,714 5 11	529 8 6		3,565 16 7		13,809 11 0	1,310 10 3	3,771 7 8	22,775 4 5	1,209 14 4	3,637 5 7	.	72,068 8 1
Westport	3,754 3 0	2,141 2 4	838 1 6	189 6 9		6,922 13 7	6,340 15 3	435 8 3		2,041 19 6		8,818 3 0	455 8 7	4,644 2 5	15,517 14 11	1,049 0 6	2,724 11 2	.	40,131 14 2
Nelson	2,408 11 10	2,991 19 6	675 17 10	18 2 7		6,094 11 9	2,009 12 3	111 8 5		581 7 1		2,702 7 9	344 0 5	257 7 7	7,405 10 7	241 9 5	779 0 1	.	17,824 7 7
Picton	4,847 17 11	3,419 17 3	257 5 0	117 10 1		8,642 10 3	2,998 1 9	253 13 9		867 14 5		4,119 9 11	263 15 1	428 13 3	5,473 5 6	258 12 1	793 19 11	..	19,980 6 0
Lake Wakatipu Steamers	.	..	.	.													..	4,951 12 3	4,951 12 3
Totals	315,633 7 3	118,540 14 6	60,476 16 1	14,655 19 0		509,306 16 10	293,235 18 4	36,250 14 0		109,953 8 5		439,440 0 9	50,073 8 11	77,781 15 8	663,260 13 0	32,840 17 5	68,604 12 11	4,951 12 3	1,846,259 17 9
	STORES.																		
Whangarei–Kawakawa ..	311 13 1	449 8 6	427 2 5	214 1 8		1,402 5 8		1,586 13 2	192 13 3	827 8 4		2,606 14 9	385 1 3	1,659 7 0	525 14 11	27 2 10	9 6 10	..	6,615 13 3
Kaihu	218 13 3	49 15 9	8 4 0	96 5 11		372 18 11		354 9 8	21 9 10	53 17 9		429 17 3	1 19 3	83 7 8	88 13 10	3 0 6	1 0 2	..	980 17 7
Gisborne	62 11 7	113 8 2	126 14 7	69 6 3		372 0 7		1,555 7 8	143 2 11	251 13 4		1,950 3 11	136 13 7	132 17 8	194 12 5	12 0 11	3 19 1	..	2,802 8 2
North Island Main Lines and Branches	89,378 16 4	20,221 2 8	20,378 2 9	6,530 18 7		163,509 0 4		168,026 4 8	10,724 3 7	38,603 18 9		217,354 7 0	22,880 18 8	18,111 14 5	26,962 11 5	1,315 4 11	450 5 8	..	423,884 2 5
South Island Main Lines and Branches	64,169 6 7	14,624 4 9	16,293 1 8	4,176 14 1		99,263 7 1		105,379 9 6	5,269 9 8	23,757 10		134,406 7 0	10,156 14 5	16,874 15 2	19,992 15 3	998 6 2	345 12 10	..	282,037 17 11
Westland	4,511 8 1	1,802 7 6	1,046 4 1	160 1 4		7,520 1 0		4,569 3 8	495 18 6	1,141 5 6		6,206 7 8	674 1 6	1,549 8 0	1,843 12 7	94 5 0	32 17 5	..	17,920 13 2
Westport	1,571 3 8	196 6 0	434 6 2	61 15 4		2,563 11 2		2,604 1 11	317 1 7	1,351 19 11		4,273 3 5	243 7 3	3,447 14 11	1,175 16 3	80 5 9	29 2 1	..	11,813 0 10
Nelson	181 3 2	328 14 9	379 4 5	16 9 10		905 12 2		1,578 4 4	116 16 10	185 5 6		1,880 6 8	268 9 4	143 4 11	685 18 1	19 3 2	6 10 2	..	3,909 4 6
Picton	967 17 0	778 7 1	207 14 6	72 14 5		2,026 13 0		3,094 10 3	174 16 1	331 7 9		3,600 14 1	141 8 7	301 5 11	295 5 4	21 9 3	6 19 6	..	6,393 15 8
Lake Wakatipu Steamers																.		1,541 1 8	1,541 1 8
Totals	161,372 12 9	38,863 15 2	39,300 14 7	11,398 7 5		250,935 9 11		288,718 4 10	17,455 12 3	66,504 4 8		372,708 1 9	34,888 13 10	42,603 15 8	51,765 0 1	2,570 18 6	885 13 9	1,541 1 8	757,898 15 2
	MISCELLANEOUS.																		
Whangarei–Kawakawa ..	3 8 3	5 4 6	1 3 6	0 9 9	88 5 11	98 11 11		12 6 3	..	365 0 4	7 12 8	384 19 3	226 0 10	482 3 6	359 7 2			..	1,551 2 8
Kaihu	..	.	..	..	1 6 11	1 6 11		0 0 9		8 16 5	0 13 3	9 10 5	5 0 6	14 5 7	22 9 6		..	..	52 12 11
Gisborne	1 0 0	1 0 10	0 5 10	..	8 3 5	10 10 1		0 11 9	.	86 13 5	34 5 7	121 10 9	18 17 3	36 5 9	224 8 4		.	..	411 12 2
North Island Main Lines and Branches	205 1 8	164 6 0	10 19 10	19 11 9	2,423 19 7	2,823 18 10		159 5 5		11,514 18 11	1,583 2 0	13,257 6 4	5,786 6 8	7,298 6 8	23,474 5 3			.	52,634 3 9
South Island Main Lines and Branches	320 15 7	132 10 8	76 18 4	16 3 2	1,409 9 5	1,955 17 2		46 16 7		5,405 14 2	688 13 10	6,141 4 7	826 13 11	3,944 10 7	22,837 8 9			.	35,705 15 0
Westland	15 15 2	19 10 0	0 8 9	..	103 19 6	139 13 5		14 16 9		430 15 4	20 15 10	466 7 11	303 9 6	563 9 5	2,921 19 2		.	..	4,394 19 5
Westport	13 10 7	40 0 2	..	6 4 9	388 15 0	448 10 6		3 5 3		317 3 9	38 0 0	358 9 0	15 9 5	1,071 17 10	2,865 2 3		.	..	4,728 10 2
Nelson	6 5 0	18 10 10	1 5 5	..	49 5 4	75 6 7		5 6 0		111 14 3	10 12 10	127 13 1	99 18 8	67 10 9	671 8 2		.	..	1,041 17 3
Picton	0 8 0	1 1 11	0 1 5	4 11 7	57 17 5	64 0 4				125 18 7	4 15 9	130 14 4	13 6 8	61 15 4	534 6 2				804 2 10
Lake Wakatipu Steamers	..	.	.			.												125 14 5	125 14 5
Totals	566 4 3	382 4 11	91 3 1	47 1 0	4,531 2 6	5,617 15 9		242 8 9		18,366 15 2	2,388 11 9	20,997 15 8	7,258 4 7	13,540 5 5	53,910 14 9		.	125 14 5	101,450 10 7
Grand Totals ..	477,572 4 3	157,786 14 7	99,868 13 9	26,101 7 5	4,531 2 6	765,860 2 6	293,235 18 4	325,211 7 7	17,455 12 3	194,824 8 3	2,388 11 9	833,145 18 2	92,220 7 4	133,925 16 9	768,936 7 10	35,411 15 11	69,490 6 8	6,618 8 4	2,705,609 3 6

H. Davidson, Chief Accountant.

RETURN No. 4.

CLASSIFIED STATEMENT showing Revenue and Expenditure, and Proportion of each Class of Expenditure to Mileage and Revenue, for the Year ended 31st March, 1913.

Section.	Mileage.		Revenue.							
	Length open for Traffic.	Train-mileage.	Total.			Per Mile of Railway per Annum (Average).			Per Train-mile.	
1912–13.	Miles.	Miles.	£	s.	d.	£	s.	d.	s.	d.
Whangarei–Kawakawa	58	115,046	41,410	4	10	713	19	5	7	2½
Kaihu	17	13,326	4,702	9	7	276	12	4	7	0¾
Gisborne	32	44,443	18,522	18	0	581	19	9	8	4
North Island Main Lines and Branches	1,092	5,004,805	2,035,996	12	10	1,884	3	5	8	1½
South Island Main Lines and Branches	1,366	3,325,274	1,533,610	18	2	1,125	16	10	9	2¾
Westland	141	240,363	144,723	7	1	1,026	8	2	12	3¼
Westport	36	112,032	124,475	16	10	3,457	13	2	22	2½
Nelson	61	75,576	29,146	19	4	525	3	5	7	8½
Picton	48	85,359	31,391	17	0	653	19	10	7	4½
Totals ..	2,851	9,016,224	3,963,981	3	8	1,400	9	2	8	9½
Lake Wakatipu Steamers	..	..	7,020	15	1	..			..	
			3,971,001	18	9					
1911–12.	Miles.	Miles.	£	s.	d.	£	s.	d.	s.	d.
Whangarei–Kawakawa	58	100,865	36,462	13	2	648	17	10	7	2¾
Kaihu	17	12,836	4,024	6	5	236	14	6	6	3¼
Gisborne	23	32,912	16,497	17	8	717	16	0	10	0¼
North Island Main Lines and Branches	1,075	4,504,854	1,877,609	16	0	1,746	12	2	8	4
South Island Main Lines and Branches	1,357	3,217,898	1,411,837	7	6	1,043	5	0	8	9¼
Westland	141	243,052	151,202	8	3	1,072	7	0	12	5¼
Westport	31	109,654	118,052	12	10	3,808	3	0	21	6¼
Nelson	48	66,267	25,026	9	1	521	7	8	7	6½
Picton	48	83,349	29,126	9	11	613	13	9	6	11¾
Totals	2,798	8,371,687	3,669,840	0	10	1,314	8	7	8	9¼
Lake Wakatipu Steamers	..	..	6,669	5	3	..			..	
			3,676,509	6	1					

Section.	Classified Expenditure.																				
	Maintenance of Way.			Locomotive Power.			Repairs to Carriages and Wagons.			Traffic Expenses.			Head Office.			Departmental Offices.			Total.		
1912–13.	£	s.	d.	£	s.	d.	£	s.	d.	£	s.	d.	£	s.	d.	£	s.	d.	£	s.	d.
Whangarei–Kawakawa	11,050	1	3	7,479	15	8	4,210	13	7	6,798	8	10	371	11	6	833	1	11	30,743	12	9
Kaihu	1,650	16	9	1,202	4	9	505	0	8	1,178	8	2	41	14	5	282	12	6	4,860	17	3
Gisborne	4,048	0	2	4,530	16	6	900	5	7	2,534	9	11	164	8	11	568	17	7	12,746	18	8
North Island Main Lines and Branches	381,137	18	0	465,188	16	11	121,054	14	5	361,026	15	3	18,172	14	10	33,927	13	1	1,380,508	12	6
South Island Main Lines and Branches	307,015	7	9	308,250	16	6	79,065	5	5	335,233	2	3	13,687	6	9	25,867	15	8	1,069,119	14	4
Westland	33,214	9	3	20,482	6	7	8,172	6	4	27,540	16	2	1,303	19	4	3,670	3	0	94,384	0	8
Westport	9,934	15	3	13,449	15	5	9,847	1	7	19,558	13	5	1,129	6	3	2,753	13	3	56,673	5	2
Nelson	7,075	10	6	4,710	7	6	1,180	11	8	8,762	16	10	260	12	7	785	10	3	22,775	9	4
Picton	10,733	3	7	7,850	18	4	1,210	4	10	6,302	17	0	280	1	4	800	19	5	27,178	4	6
Totals ..	765,860	2	6	833,145	18	2	226,146	4	1	768,936	7	10	35,411	15	11	69,490	6	8	2,698,990	15	2
Lake Wakatipu Steamers	..			..			..			..			..			..			6,618	8	4
																			2,705,609	3	6
1911–12.	£	s.	d.	£	s.	d.	£	s.	d.	£	s.	d.	£	s.	d.	£	s.	d.	£	s.	d.
Whangarei–Kawakawa	10,862	12	1	7,537	17	1	2,035	15	8	6,372	7	6	337	11	2	872	5	1	28,018	8	7
Kaihu	1,795	2	11	1,110	15	0	490	11	6	1,149	9	2	37	2	6	280	6	0	4,863	7	1
Gisborne	2,469	2	10	2,975	8	11	839	8	2	1,883	15	5	150	18	10	402	13	2	8,721	7	4
North Island Main Lines and Branches	353,724	4	9	406,177	7	5	107,162	1	1	307,581	19	8	17,332	17	0	32,528	14	3	1,224,507	4	2
South Island Main Lines and Branches	303,916	7	6	283,451	18	8	78,854	11	3	297,120	18	4	13,061		0	25,234	11	5	1,001,639	11	2
Westland	32,123	8	2	18,666	4	5	7,681	5	4	26,023	0	7	1,416	12	6	3,645	17	0	89,556	8	0
Westport	11,249	9	3	12,202	17	10	9,177	7	8	17,979	18	11	1,111	15	8	2,801	10	10	54,523	0	2
Nelson	8,763	8	0	4,382	1	7	1,337	16	0	6,979	9	9	232	1	8	766	7	9	22,461	4	9
Picton	10,641	18	5	6,938	1	11	1,460	10	0	5,540	10	6	266	14	11	760	13	7	25,608	9	4
Totals	735,545	13	11	743,442	12	10	209,039	6	8	670,631	9	10	33,946	18	3	67,292	19	1	2,459,899	0	7
Lake Wakatipu Steamers	..			..			..			..			..			..			5,996	13	0
																			2,465,895	13	7

Section.	Proportion of each Class of Expenditure to Mileage and Revenue.																				
	Maintenance.			Locomotive.			Carriages and Wagons.			Traffic.			Head Office.			Departmental Offices.			Total.		
	Per Cent. of Revenue.	Per Mile of Railway per Annum.	Per Train-mile.	Per Cent. of Revenue.	Per Mile of Railway per Annum.	Per Train-mile.	Per Cent. of Revenue.	Per Mile of Railway per Annum.	Per Train-mile.	Per Cent. of Revenue.	Per Mile of Railway per Annum.	Per Train-mile.	Per Cent. of Revenue.	Per Mile of Railway per Annum.	Per Train-mile.	Per Cent. of Revenue.	Per Mile of Railway per Annum.	Per Train-mile.	Per Cent. of Revenue.	Per Mile of Railway per Annum.	Per Train-mile.
1912–13.	£	£	d.	£	£	d.	£	£	d.	£	£	d.	£	£	d.	£	£	d.	£	£	d.
Whangarei–Kawakawa	26·68	190·52	23·05	18·06	128·96	15·60	10·17	72·60	8·78	16·42	117·22	14.18	0·90	6·40	0·78	2·01	14·36	1·74	74·24	530·06	64·13
Kaihu	35·11	97·11	29·73	25·56	70·72	21·65	10·74	29·71	9·10	25·06	69·32	21·22	0·89	2·45	0·75	6·01	16·62	5·09	103·37	285·93	87·54
Gisborne	21·86	127·19	21·86	24·46	142·35	24·47	4·86	28·29	4·86	13·68	79·64	13·69	0·89	5·16	0·89	3·07	17·88	3·07	68·82	400·51	68·84
North Island Main Lines and Branches	18·72	352·72	18·28	22·85	430·50	22·31	5·95	112·02	5·80	17·73	334·11	17·31	0·89	16·82	0·87	1·67	31·40	1·63	67·81	1,277·57	66·20
South Island Main Lines and Branches	20·02	225·38	22·16	20·10	226·29	22·25	5·15	58·04	5·70	21·86	246·10	24·19	0·89	10·05	0·99	1·69	18·99	1·87	69·71	784·85	77·16
Westland	22·95	235·56	33·17	14·15	145·27	20·45	5·65	57·96	8·16	19·03	195·32	27·50	0·90	9·25	1·30	2·54	26·03	3·66	65·22	669·39	94·24
Westport	7·98	275·97	21·28	10·81	373·60	28·81	7·91	273·53	21·10	15·71	543·30	41·90	0·91	31·37	2·42	2·21	76·49	5·90	45·53	1,574·26	121·41
Nelson	24·28	127·49	22·47	16·16	84·87	14·96	4·05	21·27	3·75	30·06	157·89	27·83	0·89	4·70	0·83	2·70	14·15	2·49	78·14	410·37	72·33
Picton	34·19	223·61	30·18	25·01	163·56	22·08	3·86	25·21	3·40	20·08	131·31	17·72	0·89	5·83	0·79	2·55	16·69	2·25	86·58	566·21	76·42
Totals ..	19·32	270·61	20·38	21·02	294·39	22·18	5·71	79·91	6·02	19·40	271·70	20·47	0·89	12·51	0·94	1·75	24·56	1·85	68·09	953·68	71·84
Lake Wakatipu Steamers	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	94·27	..	..
																			68·13		
1911–12.	£	£	d.	£	£	d.	£	£	d.	£	£	d.	£	£	d.	£	£	d.	£	£	d.
Whangarei–Kawakawa	29·79	193·31	25·85	20·67	134·15	17·94	5·58	36·23	4·85	17·48	113·40	15·16	0·93	6·01	0·80	2·39	15·52	2·08	76·84	498·62	66·68
Kaihu	44·61	105·60	33·56	27·60	65·34	20·77	12·19	28·86	9·17	28·56	67·61	21·49	0·92	2·18	0·70	6·97	16·49	5·24	120·85	286·08	90·93
Gisborne	14·96	107·35	18·00	18·04	129·37	21·70	5·09	36·50	6·12	11·42	81·90	13·74	0·91	6·56	1·10	2·44	17·51	2·94	52·86	379·19	63·60
North Island Main Lines and Branches	18·84	329·05	18·85	21·64	377·84	21·64	5·71	99·69	5·71	16·38	286·12	16·39	0·92	16·12	0·92	1·73	30·26	1·73	65·22	1,139·08	65·24
South Island Main Lines and Branches	21·53	224·57	22·67	20·08	209·45	21·14	5·58	58·27	5·88	21·04	219·55	22·16	0·93	9·65	0·98	1·79	18·65	1·88	70·95	740·14	74·71
Westland	21·25	227·83	31·72	12·34	132·38	18·43	5·08	54·48	7·58	17·21	184·56	25·70	0·94	10·05	1·40	2·41	25·85	3·60	59·23	635·15	88·43
Westport	9·53	362·89	24·62	10·34	393·64	26·71	7·78	296·04	20·08	15·23	580·00	39·35	0·94	35·87	2·43	2·37	90·37	6·13	46·19	1,758·81	119·32
Nelson	35·02	182·57	31·74	17·51	91·29	15·87	5·34	27·87	4·84	27·89	145·41	25·28	0·93	4·83	0·84	3·06	15·97	2·77	89·75	467·94	81·34
Picton	36·54	224·22	30·64	23·82	146·18	19·98	5·01	30·77	4·20	19·02	116·74	15·95	0·92	5·62	0·77	2·61	16·03	2·19	87·92	539·56	73·73
Totals	20·04	263·46	21·08	20·26	266·28	21·31	5·70	74·87	5·99	18·27	240·20	19·22	0·93	12·16	0·99	1·83	24·10	1·93	67·03	881·07	70·32
Lake Wakatipu Steamers	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	89·92	..	..
																			67·07		

H. Davidson, Chief Accountant.

Revenue, for the Year ended 31st March, 1913.

Proportion of each Class of Expenditure to Mileage and Revenue.

omotive.		Carriages and Wagons.			Traffic.			Head Office.			Departmental Offices.			Total.		
Per Mile of Railway per Annum.	Per Train-mile.	Per Cent. of Revenue.	Per Mile of Railway per Annum.	Per Train-mile.	Per Cent. of Revenue.	Per Mile of Railway per Annum.	Per Train-mile.	Per Cent. of Revenue.	Per Mile of Railway per Annum.	Per Train-mile.	Per Cent. of Revenue.	Per Mile of Railway per Annum.	Per Train-mile.	Per Cent. of Revenue.	Per Mile of Railway per Annum.	Per Train-mile.
£	d.	£	£	d.	£	£	d.	£	£	d.	£	£	d.	£	£	d.
128·96	15·60	10·17	72·60	8·78	16·42	117·22	14.18	0·90	6·40	0·78	2·01	14·36	1·74	74·24	530·06	64·13
70·72	21·65	10·74	29·71	9·10	25·06	69·32	21·22	0·89	2·45	0·75	6·01	16·62	5·09	103·37	285·93	87·54
142·35	24·47	4·86	28·29	4·86	13·68	79·64	13·69	0·89	5·16	0·89	3·07	17·88	3·07	68·82	400·51	68·84
430·50	22·31	5·95	112·02	5·80	17·73	334·11	17·31	0·89	16·82	0·87	1·67	31·40	1·63	67·81	1,277·57	66·20
226·29	22·25	5·15	58·04	5·70	21·86	246·10	24·19	0·89	10·05	0·99	1·69	18·99	1·87	69·71	784·85	77·16
145·27	20·45	5·65	57·96	8·16	19·03	195·32	27·50	0·90	9·25	1·30	2·54	26·03	3·66	65·22	669·39	94·24
373·60	28·81	7·91	273·53	21·10	15·71	543·30	41·90	0·91	31·37	2·42	2·21	76·49	5·90	45·53	1,574·26	121·41
84·87	14·96	4·05	21·27	3·75	30·06	157·89	27·83	0·89	4·70	0·83	2·70	14·15	2·49	78·14	410·37	72·33
163·56	22·08	3·86	25·21	3·40	20·08	131·31	17·72	0·89	5·83	0·79	2·55	16·69	2·25	86·58	566·21	76·42
294·39	22·18	5·71	79·91	6·02	19·40	271·70	20·47	0·89	12·51	0·94	1·75	24·56	1·85	68·09	953·68	71·84
..	..	..	..	..	..	..	..	..	..	..	..	..	..	94·27	..	..
														68·13		
£	d.	£	£	d.	£	£	d.	£	£	d.	£	£	d.	£	£	d.
134·15	17·94	5·58	36·23	4·85	17·48	113·40	15·16	0·93	6·01	0·80	2·39	15·52	2·08	76·84	498·62	66·68
65·34	20·77	12·19	28·86	9·17	28·56	67·61	21·49	0·92	2·18	0·70	6·97	16·49	5·24	120·85	286·08	90·93
129·37	21·70	5·09	36·50	6·12	11·42	81·90	13·74	0·91	6·56	1·10	2·44	17·51	2·94	52·86	379·19	63·60
377·84	21·64	5·71	99·69	5·71	16·38	286·12	16·39	0·92	16·12	0·92	1·73	30·26	1·73	65·22	1,139·08	65·24
209·45	21·14	5·58	58·27	5·88	21·04	219·55	22·16	0·93	9·65	0·98	1·79	18·65	1·88	70·95	740·14	74·71
132·38	18·43	5·08	54·48	7·58	17·21	184·56	25·70	0·94	10·05	1·40	2·41	25·85	3·60	59·23	635·15	88·43
393·64	26·71	7·78	296·04	20·08	15·23	580·00	39·35	0·94	35·87	2·43	2·37	90·37	6·13	46·19	1,758·81	119·32
91·29	15·87	5·34	27·87	4·84	27·89	145·41	25·28	0·93	4·83	0·84	3·06	15·97	2·77	89·75	467·94	81·34
146·18	19·98	5·01	30·77	4·20	19·02	116·74	15·95	0·92	5·62	0·77	2·61	16·03	2·19	87·92	539·56	73·73
266·28	21·31	5·70	74·87	5·99	18·27	240·20	19·22	0·93	12·16	0·99	1·83	24·10	1·93	67·03	881·07	70·52
..	..	..	..	..	..	..	..	..	..	..	..	..	..	89·92	..	..
														67·07		

H. Davidson, Chief Accountant.

3·

e-Stock, Goods, &c.

	Firewood.			Timber.			Grain.			Merchandise.			Minerals.			Total.			Gross Total Tonnage.		
q.	Tons	c.	q.	Tons	c.	q.	Tons	c.	q.	Tons	c.	q.	Tons	c.	q.	Tons	c.	q.	Tons	c.	q.
	1,770	0	0	33,283	4	0	5,369	10	0	8,390	13	0	108,143	15	0	159,417	2	0	160,072	9	0
0	552	0	0	6,534	6	0	951	0	0	1,473	6	0	803	1	0	11,211	9	0	11,246	9	0
0	1,296	0	0	4,307	16	0	4,768	18	0	2,950	8	0	22,815	9	0	39,619	15	0	42,755	11	0
0	63,006	0	0	317,713	12	0	307,980	5	0	334,326	14	0	628,604	10	0	1,777,550	17	0	1,927,524	5	0
0	29,228	0	0	196,895	2	0	822,217	3	0	455,724	2	0	767,076	2	0	2,469,113	17	0	2,598,207	10	0
0	3,462	0	0	127,477	18	0	9,850	19	0	21,843	3	0	404,423	18	0	569,534	2	0	571,219	13	0
0	7,864	0	0	2,358	0	0	2,970	17	0	4,994	6	0	808,084	17	0	827,112	16	0	827,267	4	0
0	3,508	0	0	3,502	18	0	9,038	0	0	6,457	1	0	9,916	6	0	35,796	13	0	36,387	3	0
0	1,356	0	0	2,396	18	0	17,079	11	0	7,823	14	0	9,683	10	0	61,264	13	0	64,679	7	0
0	30	0	0	590	13	0	1,672	12	0	1,950	9	0	1,431	15	0	6,384	5	0	6,768	16	0
0	112,072	0	0	695,060	7	0	1,181,898	15	0	845,933	16	0	2,760,983	3	0	5,957,005	9	0	6,246,128	7	0
	1,788	0	0	17,891	10	0	4,868	14	0	7,583	17	0	115,378	2	0	147,720	3	0	148,327	12	0
0	516	0	0	6,767	12	0	758	10	0	1,659	3	0	335	2	0	10,111	15	0	10,186	7	0
0	492	0	0	3,913	0	0	4,868	1	0	4,210	13	0	22,953	16	0	39,119	14	0	41,988	9	0
0	61,440	0	0	313,522	11	0	285,223	3	0	309,076	17	0	598,031	2	0	1,667,952	1	0	1,818,539	9	0
0	30,056	0	0	222,951	3	0	615,750	2	0	445,927	6	0	730,282	18	0	2,247,870	9	0	2,375,065	0	0
0	2,770	0	0	143,173	11	0	10,332	6	0	23,928	4	0	414,347	1	0	596,643	14	0	598,277	7	0
0	8,184	0	0	3,044	4	0	3,227	15	0	4,788	5	0	775,206	1	0	794,925	5	0	795,048	12	0
0	3,492	0	0	4,108	19	0	8,140	5	0	5,191	5	0	9,423	2	0	33,144	15	0	33,689	2	0
0	1,656	0	0	2,527	9	0	14,440	16	0	6,881	9	0	9,422	10	0	54,929	12	0	59,097	8	0
0	42	0	0	513	11	0	1,946	0	0	1,919	10	0	1,403	12	0	7,338	13	0	7,688	15	0
0	110,436	0	0	718,413	10	0	949,555	12	0	811,166	9	0	2,676,783	6	0	5,599,756	1	0	5,887,908	1	0

d Total venue.			Mileage.		
			Train.	Shunting and Ballasting.	Total.
£	s.	d.	No.	No.	No.
10	4	10	115,046	31,695	146,741
02	9	7	13,326	9,416	22,742
22	18	0	44,443	21,110	65,553
96	12	10	5,004,805	1,533,376	6,538,181
10	18	2	3,325,274	1,189,791	4,515,065
23	7	1	240,363	115,618	355,981
75	16	10	112,032	96,501	208,533
46	19	4	75,576	22,147	97,723
91	17	0	85,359	54,047	139,406
20	15	1	..	..	..
01	18	9	9,016,224	3,073,701	12,089,952
62	13	2	100,865	27,980	128,845
24	6	5	12,836	3,919	16,755
97	17	8	32,912	28,507	61,419
09	16	0	4,504,854	1,403,967	5,908,821
37	7	6	3,217,898	1,169,857	4,387,755
02	8	3	243,052	116,494	359,546
52	12	10	109,654	112,340	221,994
26	9	1	66,267	27,294	93,561
26	9	11	83,349	48,033	131,382
69	5	3	..	..	..
09	6	1	8,371,687	2,938,391	11,310,078

H. Davidson, Chief Accountant.

RETURN No. 5.

COMPARATIVE STATEMENT of PASSENGER and GOODS TRAFFIC for the Year ended 31st March, 1913.

Sections.	Length Open for Traffic.	Passengers.					Total Season Tickets.	Parcels, &c.					Live-Stock, Goods, &c.															
		First Class.		Second Class.		Total.		Parcels.	Horses.	Carriages.	Dogs.	Total.	Drays, &c.	Cattle.	Calves.	Sheep.	Pigs.	Total.	Equivalent Tonnage for Live-Stock, &c.	Chaff, Lime, &c.	Wool.	Firewood.	Timber.	Grain.	Merchandise.	Minerals.	Total.	Gross Total Tonnage.
1912–13.	Miles.	Single.	Return.	Single.	Return.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	Tons c. q.	Tons c. q.	Tons c. q.	Tons c. q.	Tons c. q.	Tons c. q.	Tons c. q.	Tons c. q.	Tons c. q.	Tons c. q.
Whangarei–Kawakawa ..	58	16,634	10,712	64,917	82,106	174,369	966	5,510	163	21	667	6,361	32	702	156	9,514	432	10,836	655 7 0	2,460 0 0	..	1,770 0 0	33,283 4 0	5,369 10 0	8,390 13 0	108,143 15 0	159,417 2 0	160,072 9 0
Kaihu	17	338	1,240	11,381	15,470	28,429	4	4,447	60	10	179	4,696	13	46	6	247	73	385	35 0 0	846 0 0	51 16 0	552 0 0	6,534 6 0	951 0 0	1,473 6 0	803 1 0	11,211 9 0	11,246 9 0
Gisborne	32	6,748	6,034	36,867	42,054	91,703	98	7,611	97	21	733	8,462	31	683	56	71,521	722	73,013	3,135 16 0	1,314 0 0	2,167 4 0	1,296 0 0	4,307 16 0	4,768 18 0	2,950 8 0	22,815 9 0	39,619 15 0	42,755 11 0
North Island Main Lines and Branches	1,092	256,876	718,226	1,527,770	4,428,650	6,931,522	165,886	593,775	10,588	1,348	31,124	636,835	1,454	13,5449	21,052	2,481,179	94,923	2,734,057	149,973 8 0	89,292 0 0	36,627 16 0	63,006 0 0	317,713 12 0	307,980 5 0	334,326 14 0	628,604 10 0	1,777,550 17 0	1,927,524 5 0
South Island Main Lines and Branches	1,366	187,805	721,182	865,321	3,315,948	5,090,256	92,409	652,197	9,726	1,345	21,559	684,827	1,544	55,624	3,838	2,699,910	39,789	2,800,705	129,093 13 0	93,586 0 0	104,387 8 0	29,228 0 0	196,895 2 0	822,217 3 0	455,724 2 0	767,076 2 0	2,469,113 17 0	2,598,207 10 0
Westland	141	14,155	28,286	109,957	251,188	403,586	3,327	30,473	744	66	1,165	32,448	47	2,400	273	21,185	28	23,933	1,685 11 0	2,220 0 0	256 4 0	3,462 0 0	127,477 18 0	9,850 19 0	21,843 3 0	404,423 18 0	569,534 2 0	571,219 13 0
Westport	36	554	1,748	28,355	76,988	107,645	917	8,073	67	2	181	8,323	14	42	25	3,273	29	3,383	154 8 0	840 0 0	0 16 0	7,864 0 0	2,358 0 0	2,970 17 0	4,994 6 0	808,084 17 0	827,112 16 0	827,267 4 0
Nelson	61	2,594	7,606	38,849	74,986	124,035	1,158	6,246	59	33	524	6,862	12	144	17	13,443	8	13,624	590 10 0	2,670 0 0	704 8 0	3,508 0 0	3,502 18 0	9,038 0 0	6,457 1 0	9,916 6 0	35,796 13 0	36,387 3 0
Picton	48	8,792	29,572	27,981	80,890	147,235	474	5,395	327	26	1,090	6,838	35	450	424	80,519	126	81,554	3,414 14 0	19,908 0 0	3,017 0 0	1,356 0 0	2,396 18 0	17,079 11 0	7,823 14 0	9,683 10 0	61,264 13 0	64,679 7 0
Lake Wakatipu Steamers	..	1,968	12,726	3,183	7,222	25,099	20	7,146	140	32	166	7,484	7	177	1	8,044	.	8,229	384 11 0	186 0 0	522 16 0	30 0 0	590 13 0	1,672 12 0	1,950 9 0	1,431 15 0	6,384 5 0	6,768 16 0
Totals	2,851	496,464	1,537,332	2,714,581	8,375,502	13,123,879	265,259	1,320,873	21,971	2,904	57,388	1,403,136	3,189	195,717	25,878	5,388,805	136,130	5,749,719	289,122 18 0	213,322 0 0	147,735 8 0	112,072 0 0	695,060 7 0	1,181,898 15 0	845,933 16 0	2,760,983 3 0	5,957,005 9 0	6,246,128 7 0
1911–12.																												
Whangarei–Kawakawa ..	58	15,778	9,378	52,333	65,012	142,501	841	3,332	142	25	515	4,014	34	381	38	11,259	280	11,992	607 9 0	210 0 0	..	1,788 0 0	17,891 10 0	4,868 14 0	7,583 17 0	115,378 2 0	147,720 3 0	148,327 12 0
Kaihu	17	332	768	10,308	12,674	24,082	20	4,511	48	23	186	4,768	35	33	.	1,153	.	1,221	71 12 0	36 0 0	39 8 0	516 0 0	6,767 12 0	758 10 0	1,659 3 0	335 2 0	10,111 15 0	10,186 7 0
Gisborne	23	5,879	5,514	37,070	40,526	88,989	125	5,950	52	11	584	6,597	41	397	22	67,425	445	68,330	2,868 15 0	660 0 0	2,022 4 0	492 0 0	3,913 0 0	4,868 1 0	4,210 13 0	22,953 16 0	39,119 14 0	41,988 9 0
North Island Main Lines and Branches	1,075	253,294	649,418	1,430,126	3,809,584	6,142,422	147,637	534,871	9,748	1,267	30,675	576,561	1,299	124,324	16,560	2,590,669	101,045	2,833,897	150,587 8 0	66,784 0 0	33,874 8 0	61,440 0 0	313,522 11 0	285,223 3 0	309,076 17 0	598,031 2 0	1,667,952 1 0	1,818,539 9 0
South Island Main Lines and Branches	1,357	181,202	666,306	814,928	3,045,974	4,708,410	81,537	588,179	9,147	1,312	21,089	619,727	1,367	56,350	5,826	2,640,999	44,911	2,749,453	127,194 11 0	101,964 0 0	100,939 0 0	30,056 0 0	222,951 3 0	615,750 2 0	445,927 6 0	730,282 18 0	2,247,870 9 0	2,375,065 0 0
Westland	141	14,258	26,588	112,603	251,228	404,677	4,329	30,766	706	87	1,270	32,829	47	2,314	212	20,667	37	23,277	1,633 13 0	1,848 0 0	244 12 0	2,770 0 0	143,173 11 0	10,332 6 0	23,928 4 0	414,347 1 0	596,643 14 0	598,277 7 0
Westport	31	621	1,838	28,551	76,474	107,484	912	7,355	59	1	233	7,648	21	23	7	2,470	152	2,673	123 7 0	474 0 0	1 0 0	8,184 0 0	3,044 4 0	3,227 15 0	4,788 5 0	775,206 1 0	794,925 5 0	795,048 12 0
Nelson	48	2,303	6,652	34,029	70,214	113,198	1,012	5,323	68	27	350	5,768	14	185	106	11,729	32	12,066	544 7 0	2,148 0 0	641 4 0	3,492 0 0	4,108 19 0	8,140 5 0	5,191 5 0	9,423 2 0	33,144 15 0	33,689 2 0
Picton	48	8,567	26,614	27,251	75,984	138,416	529	4,094	377	20	1,100	5,591	38	292	348	100,486	366	101,530	4,167 16 0	16,812 0 0	3,489 8 0	1,656 0 0	2,527 9 0	14,440 16 0	6,881 9 0	9,422 10 0	54,929 12 0	59,097 8 0
Lake Wakatipu Steamers	..	1,843	10,368	2,882	5,862	20,955	15	6,526	163	28	154	6,871	8	128		7,586	.	7,722	350 2 0	858 0 0	656 0 0	42 0 0	513 11 0	1,946 0 0	1,919 10 0	1,403 12 0	7,338 13 0	7,688 15 0
Totals	2,798	484,077	1,403,444	2,550,081	7,453,532	11,891,134	236,957	1,190,907	20,510	2,801	56,156	1,270,374	2,904	184,427	23,119	5,451,443	147,268	5,812,161	288,152 0 0	191,794 0 0	141,607 4 0	110,436 0 0	718,413 10 0	949,555 12 0	811,166 9 0	2,676,783 6 0	5,599,756 1 0	5,887,908 1 0

Sections.	Revenue.									Mileage.		
	Ordinary Passengers.	Season Tickets.	Parcels, Luggage, and Mails.	Total Coaching.	Goods.	Miscellaneous.	Rents and Commission.	Total Goods.	Grand Total Revenue.	Train.	Shunting and Ballasting.	Total.
1912–13.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	No.	No.	No.
Whangarei–Kawakawa ..	9,805 2 1	522 18 5	1,139 1 5	11,497 1 11	28,871 18 11	360 15 4	680 8 8	29,913 2 11	41,410 4 10	115,046	31,695	146,741
Kaihu	1,466 11 5	41 7 3	353 8 9	1,861 7 5	2,414 1 1	275 3 7	151 17 6	2,841 2 2	4,702 9 7	13,326	9,416	22,742
Gisborne	6,607 7 6	183 8 7	965 1 6	7,755 17 7	9,595 10 1	664 5 0	507 5 4	10,767 0 5	18,522 18 0	44,443	21,110	65,553
North Island Main Line and Branches	765,762 4 3	94,856 6 7	115,807 17 9	976,426 8 7	1,003,498 19 8	20,124 1 10	35,947 2 9	1,059,570 1 3	2,035,996 12 10	5,004,805	1,533,376	6,538,181
South Island Main Line and Branches	478,479 0 6	47,615 8 0	87,584 0 5	613,678 8 11	862,378 6 4	30,592 5 7	26,961 17 4	919,932 9 3	1,533,610 18 2	3,325,274	1,189,791	4,515,065
Westland	25,691 13 7	1,903 0 5	4,896 7 6	32,491 1 6	105,796 18 4	4,261 5 5	2,174 1 10	112,232 5 7	144,723 7 1	240,363	115,618	355,981
Westport	5,885 12 5	557 9 6	991 15 6	7,434 17 5	109,406 14 1	6,859 18 6	774 6 10	117,040 19 5	124,475 16 10	112,032	96,501	208,533
Nelson	7,712 19 11	862 15 10	1,332 17 3	9,908 13 0	16,456 2 3	1,669 0 10	1,113 3 5	19,238 6 4	29,146 19 4	75,576	22,147	97,723
Picton	9,791 7 10	512 11 7	1,292 7 1	11,596 6 6	16,708 10 6	2,293 19 10	793 0 2	19,795 10 6	31,391 17 0	85,359	54,047	139,406
Lake Wakatipu Steamers	3,137 16 9	447 10 11	846 6 2	4,431 13 10	2,568 6 10	Cr. 9 15 7	30 10 0	2,589 1 3	7,020 15 1			..
Totals	1,314,339 16 3	147,532 17 1	215,209 3 4	1,677,081 16 8	2,157,686 8 1	67,100 0 4	69,133 13 8	2,293,920 2 1	3,971,001 18 9	9,016,224	3,073,701	12,089,925
1911–12.												
Whangarei–Kawakawa ..	8,446 7 9	554 15 7	982 11 9	9,983 15 1	25,200 2 3	829 17 2	448 18 8	26,478 18 1	36,462 13 2	100,865	27,980	128,845
Kaihu	1,215 7 5	55 5 4	357 12 6	1,628 5 3	2,198 12 5	48 10 8	148 18 1	2,396 1 2	4,024 6 5	12,836	3,919	16,755
Gisborne	5,729 17 10	180 10 0	702 17 7	6,613 5 5	8,298 7 8	1,440 9 6	145 15 1	9,884 12 3	16,497 17 8	32,912	28,507	61,419
North Island Main Line and Branches	688,594 13 6	85,030 0 2	108,795 18 3	882,420 11 11	944,363 17 6	18,533 0 7	32,292 6 0	995,189 4 1	1,877,609 16 0	4,504,854	1,403,967	5,908,821
South Island Main Line and Branches	431,031 12 3	43,381 8 0	83,244 7 7	557,657 7 10	803,469 19 7	24,568 9 9	25,841 10 4	853,879 19 8	1,411,837 7 6	3,217,898	1,169,857	4,387,755
Westland	25,939 12 2	1,952 7 5	5,076 2 2	32,968 1 9	112,212 0 0	4,042 7 2	1,979 19 4	118,234 6 6	151,202 8 3	243,052	116,494	359,546
Westport	6,072 7 0	559 15 3	856 11 7	7,488 13 10	104,019 12 9	5,863 6 0	681 0 3	110,563 19 0	118,052 12 10	109,654	112,340	221,994
Nelson	6,336 10 6	796 15 10	1,189 11 4	8,322 17 8	14,712 4 10	1,053 8 3	937 18 4	16,703 11 5	25,026 9 1	66,267	27,294	93,561
Picton	9,325 0 0	593 4 7	1,286 14 1	11,204 18 8	15,521 14 5	1,679 18 3	719 18 7	17,921 11 3	29,126 9 11	83,349	48,033	131,382
Lake Wakatipu Steamers	2,634 0 7	385 0 0	841 11 3	3,860 11 10	2,788 0 9	Cr. 4 7 4	25 0 0	2,808 13 5	6,669 5 3	..		
Totals ..	1,185,825 0 0	133,289 14 2	203,333 15 1	1,522,448 9 3	2,032,784 12 2	57,754 0 0	63,522 4 8	2,154,060 16 10	3,676,509 6 1	8,371,687	2,938,391	11,310,078

H. DAVIDSON, Chief Accountant.

RETURN No. 6.

Estimated Amount of Expenditure on Construction of Railways, Rolling-stock, &c., to 31st March, 1913; Net Revenue, and Rate of Interest earned on Capital expended on Opened Lines for Year ended same Date.

Section.	Cost of Construction, etc.		Net Revenue.	Rate of Interest earned.
	Opened Lines.	Unopened Lines.		
	£	£	£	£ s. d.
Whangarei–Kawakawa	572,438	..	10,667	1 17 3
〃	..	116,397	..	..
Kaihu	68,281	..	−158	..
〃	..	20,289	..	..
Gisborne	332,268	..	5,776	1 14 11
〃	..	223,666	..	..
North Island Main Lines and Branches	13,641,054	..	655,488	4 17 5
〃 〃	..	533,547	..	..
South Island Main Lines and Branches	13,511,641	..	464,491	3 8 11
〃 〃	..	418,777	..	..
Westland	1,715,702	..	50,339	2 18 8
〃	..	627,508	..	..
Westport	586,239	..	67,803	11 11 4
〃	..	60,019	..	..
Nelson	531,117	..	6,371	1 6 6
〃	..	22,801	..	..
Picton	574,424	..	4,214	0 14 8
〃	..	48,104	..	..
Lake Wakatipu steamer service	40,254	..	402	0 19 11
In suspense—				
Surveys, North Island	..	32,802	..	..
Miscellaneous, North Island	..	5,169	..	..
Surveys, South Island	..	5,636	..	..
Miscellaneous, South Island	..	5,168	..	..
P.W.D. stock of permanent-way	..	100,680	..	..
W.R.D. stock of A.O.L. stores	37,802	..	..	..
	£31,611,220	..	£1,265,393	£4 0 9
		£2,220,563		
Total cost of opened and unopened lines at 31st March, 1913	£33,831,783		£1,265,393	£3 14 10

Note.—The amount stated in this return as the cost of construction of opened lines includes the Provincial and General Government expenditure on railways. It also includes the Midland Railway and expenditure by the Greymouth and Westport Harbour Boards on railways and wharves under the provisions of section 7 of the Railways Authorisation Act, 1885, the information regarding the last mentioned being furnished by the respective Boards. The rate of interest earned has been computed on cost proportionately to the time during which lines taken over by the Working Railways Department within the financial year were earning revenue, thus:—

Gisborne Section—
Waikohu–Otoko ... ... Opened for traffic 6th April, 1912.
North Island Main Lines and Branches—
Te Wera-Pohokura ... ... 〃 1st August, 〃
Te Hana-Kaiwaka... ... ... 〃 18th March, 1913.
South Island Main Lines and Branches—
Mina-Parnassus ... ... 〃 2nd September, 1912.
Westport Section—
Westport-Te Kuha ... ... 〃 1st April, 〃
Nelson Section—
Kiwi-Glenhope ... ... 〃 2nd September, 〃

H. Davidson, Chief Accountant.

RETURN No. 7.

EXPENDITURE under Vote for ADDITIONS to OPEN LINES, charged to Capital Account, for the Year ended 31st March, 1913.

—	Amount	Total.
	£ s. d.	£ s. d.
Material on hand at 31st March, 1912	..	17,266 18 5
Expenditure charged to Vote 94 by Treasury	..	464,636 8 1
		481,903 6 6
Less material on hand at 31st March, 1913	..	37,801 16 6
Expenditure on Works, &c.—		
Way and Works Branch	164,576 19 4	
Locomotive Branch	279,524 10 8	
		444,101 10 0

WAY AND WORKS BRANCH: PARTICULARS OF WORKS, ETC.

Railway.	Work, &c.	Amount.	Total.
		£ s. d.	£ s. d.
North Island Main Lines and Branches	Sidings, loading-banks, stockyards, crossings, &c. ..	13,927 14 7	
	Additions to station buildings, extension of station-yards, and other facilities	16,146 15 4	
	Additional works, water-services, &c., for Locomotive Branch	8,017 10 0	
	Reduction of grades and improvement of curves.. ..	33,030 17 3	
	Duplication of line, Westfield–Otahuhu	3,781 9 8	
	Additional dwellings	687 9 0	
	Purchase of land	4,312 6 5	
	Reclamation of land	11,336 16 7	
	Bridge-work and subways	2,735 13 9	
	Culvert-extension, Waterloo Quay, Wellington	653 19 1	
	Cranes, weighbridges, &c.	1,017 0 11	
	Stone-crusher	514 4 0	
	Fire-prevention services	352 4 5	
	Gasworks-extension	306 0 2	
	Additions to workshops	4,401 11 7	
	Signals and interlocking, and locking points at crossing stations	7,238 18 7	
	Tablet-installation	8,538 0 8	
	Telegraph and telephone facilities	1,803 4 9	
	Fixed signals at officered stations	324 17 3	119,126 14 0
Whangarei–Kawakawa ..	Sidings and loading-bank	761 14 11	
	Station buildings	719 19 10	
	Additions to workshops	334 4 4	
	Fixed signals at officered stations	130 15 1	1,946 14 2
Kaihu	Siding	..	193 2 7
Picton	New wharf	12,459 19 4	
	Additions to station buildings	2,372 16 0	
	Telegraph and telephone facilities, &c...	649 13 10	15,482 9 2
Nelson	Wharf-extension, &c...	715 19 11	
	Telegraph and telephone facilities	461 0 4	1,177 0 3
Westland	Additions to station buildings	155 2 7	
	Approach-road	266 19 3	422 1 10
South Island Main Lines and Branches	Sidings, loading-banks, stockyards, crossings, &c. ..	2,684 2 7	
	Additions to station buildings, extension of station-yards, and other facilities	7,168 2 3	
	Additional works, water-services, &c., for Locomotive Branch	3,533 17 5	
	Additional dwellings	1,248 15 0	
	Additions to workshops	1,487 10 11	
	Purchase of land	812 10 7	
	Reclamation of land	1,000 0 0	
	New District Offices, Christchurch	2,019 9 6	
	Bridge-work	405 19 1	
	Turntables	1,815 11 11	
	Gasworks-extension	378 1 10	
	Concrete-mixer	305 0 0	
	Fencing	173 9 5	
	Signals and interlocking	1,002 0 10	
	Tablet-installation	140 15 7	
	Telegraph and telephone facilities	772 13 11	
	Fixed signals at officered stations	101 12 4	25,049 13 2
Lake Wakatipu Service..	Extension of wharves, &c.	..	1,179 4 2
			£164 576 19 4

RETURN No. 7—*continued.*

Locomotive Branch: Particulars of Rolling-stock, etc.

Description of Stock ordered.	Order.	Number Incomplete on March 31, 1912.	Number Complete on 31st March, 1913.	Number Incomplete on 31st March, 1913.	Expenditure in Year ended 31st March, 1913.		
					£	s.	d.
Wagons, four-wheel, 1908–1909 programme	S—7	20	20	..	646	10	2
Carriages, Class A, 1909–1910 programme	X—7	..	..	..	302	7	9
Wagons, bogie, 1909–1910 programme	Z—7	12	12	..	1,715	9	4
Wagons, four-wheel, 1909–1910 programme	A—8	300*	300	..	2,428	9	1
Locomotives, Class Ba	E—8	6	5	1	7,825	4	9
Carriages, Class A, 1910–1911 programme	J—8	7	5	2	2,730	12	4
Brake-vans, Class F, 1910–1911 programme	K—8	1	1	..	329	4	2
Wagons, bogie, 1910–1911 programme	L—8	2	2	..	193	14	10
Wagons, four-wheel, 1910–1911 programme	M—8	646	488	158	22,219	10	0
Pneumatic coaling-cranes	N—8	2	2	..	63	16	4
Locomotives, Class Wg	O—8	8	8	..	9,834	19	6
Tarpaulins, 1910–1911 programme	P—8	87	87	..	62	17	0
Carriages, Class A, 1911–1912 programme	Q—8	31	21	10	15,656	9	11
Wagons, bogie, 1911–1912 programme	R—8	17	15	2	1,933	0	3
Wagons, four-wheel, 1911–1912 programme	S—8	84	74	10	10,047	9	1
Tarpaulins, 1911–1912 programme	T—8	910	910	..	382	7	11
Locomotives, Class Wg	U—8	20	..	20	15,338	9	11
Locomotives, Class X	V—8	10	..	10	9,243	0	3
Motor rail car	W—8	1	1	..	412	4	7
Locomotives, Class Ad (contract)	X—8	20†	7	13	27,283	2	4
Steamer for Lake Wakatipu service	Y—8	1	1	..	6,043	5	4
Carriages, Class Aa, for Main Trunk	Z—8	25	25	..	27,021	0	2
Carriages, Class A, for Rotorua Express	A—9	20	20	..	18,065	16	5
Carriages, Class A, 1912–1913 programme	B—9	22	..	22	8,506	16	7
Brake-vans, Class F, 1912–1913 programme	C—9	8	2	6	2,651	16	1
Wagons, bogie, 1912–1913 programme	D—9	54	11	43	9,861	4	6
Wagons, four-wheel, 1912–1913 programme	E—9	841	45	796	48,187	7	5
Wagons, Class P, for Whangarei	F—9	20	..	20	1,043	10	11
Brake-vans, "Fell," for Greymouth	G—9	2	1	1	439	19	1
Pneumatic coaling-cranes	H—9	3	..	3	219	3	1
Fitting Gisborne rolling-stock with Westinghouse brake	I—9	..	..	..	670	0	11
Tarpaulins, 1912–1913 programme	J—9	1,220	270	950	2,874	0	8
Fitting brake-vans with Pintsch gas	K—9	..	..	..	3,835	9	1
Fitting locomotives with steam heating-gear	L—9	..	..	..	1,508	6	6
Fitting cars with steam heating-gear	M—9	..	..	..	5,110	16	11
Carriages, Class A, 1913–1914 programme	N—9	65	..	65	..		
Brake-vans, Class F, 1913–1914 programme	O—9	19	..	19	..		
Wagons, bogie, 1913–1914 programme	P—9	68	..	68	..		
Wagons, four-wheel, 1913–1914 programme	Q—9	454	..	454	..		
Tarpaulins, 1913–1914 programme	R—9	1,075	..	1,075	..		
Workshop machinery	..	..	..	..	14,766	7	3
Footwarmers	..	..	..	..	70	10	3
Total	..	..	..	..	£279,524	10	8
Total locomotives	..	64	20	44	..		
" carriages	..	170	71	99	..		
" brake-vans	..	30	4	26	..		
" wagons, bogie	..	153	40	113	..		
" wagons, four-wheel	..	2,365	927	1,438	..		
" tarpaulins	..	3,292	1,267	2,025	..		

* Order reduced by 8. † Contract increased to 20.

Expenditure under the Hutt Railway and Road Improvement Acts, 1903 and 1905, for the Year ended 31st March, 1913.

	£ s. d.	£ s. d.
Railway Capital Account:—		
Straightening and doubling Wellington–Hutt Railway		1,105 10 10
Less value of working-plant transferred to other works	3,021 5 7	
Less transfer to New Hutt Road in adjustment of land claims, &c.	8,285 12 7	
		11,306 18 2
Cr.		£10,201 7 4

	£ s. d.
For Recovery in terms of Act:—	
New Hutt Road (including land for same)	1,738 6 5
New Hutt Road, adjustment as above	8,285 12 7
Dr.	£10,023 19 0

Expenditure under the Railways Improvements Authorisation Act, 1904, charged to Capital Account for the Year ended 31st March, 1913.

	£ s. d.
Dunedin–Mosgiel, duplication and deviation of line	29,253 9 9
Charges and expenses of raising loan, as per Treasury-books	0 3 6
	£29,253 13 3

H. Davidson, Chief Accountant.

RETURN No. 8.

Return of Revenue received by Railway Department from other Departments of the Public Service for the Year ended 31st March, 1913.

Department.	Passengers.			Mails.			Goods.			Total.		
	£	s.	d.	£	s.	d.	£	s.	d.	£	s.	d.
Agriculture	2,802	0	0	..			1,386	12	0	4,188	12	0
Audit	297	11	4	..			..			297	11	4
Customs	141	8	7	..			5	14	2	147	2	9
Defence	12,360	11	4	..			4,286	2	7	16,646	13	11
Education	19,070	18	11	..			1,519	2	4	20,590	1	3
Hospitals, Charitable Aid, and Public Health	1,031	11	7	..			124	14	9	1,156	6	4
Internal Affairs	2,077	11	7	..			6	7	3	2,083	18	10
Justice	2,127	2	5	..			16	17	3	2,143	19	8
Junior Cadets	110	2	0	..			0	6	3	110	8	3
Lands and Survey	1,686	7	8	..			342	16	6	2,029	4	2
Legislative	18	0	1	..			0	8	0	18	8	1
Labour	3,160	7	2	..			1	11	3	3,161	18	5
Mental Hospitals	171	12	7	..			1,708	10	0	1,880	2	7
Mines	268	11	11	..			31,570	2	7	31,838	14	6
Marine and Machinery	568	5	3	..			27	9	7	595	14	10
Native	61	14	4	..			7	15	5	69	9	9
National Provident	14	1	6	..			..			14	1	6
Printing and Stationery	..			..			230	7	2	230	7	2
Public Works	1,778	9	1	..			20,820	17	0	22,599	6	1
Public Trustee	55	10	0	..			0	1	9	55	11	9
Police	2,846	2	2	..			617	13	7	3,463	15	9
Post and Telegraph	2,441	18	6	60,963	4	0	7,747	12	6	71,152	15	0
Prisons	774	8	7	..			296	5	2	1,070	13	9
Registrar-General	70	0	0	..			0	0	6	70	0	6
State Advances	40	10	0	..			..			40	10	0
Stamps	39	17	9	..			0	4	5	40	2	2
Tourist and Health Resorts	..			..			859	17	5	859	17	5
Valuation	360	17	2	..			3	6	11	364	4	1
Totals	54,375	11	6	60,963	4	0	71,580	16	4	186,919	11	10

H. Davidson, Chief Accountant.

RETURN No. 9.

Statement of Season Tickets issued for the Year ended 31st March, 1913.

Description.	Number.	Amount.		
		£	s.	d.
Travellers' tickets, all lines	7	531	0	0
Travellers' tickets, North Island	40	2,129	10	0
Travellers' tickets, South Island	44	2,302	0	0
Reporters' tickets	102	1,014	5	0
Sectional tickets, North Island	354	10,716	16	9
Sectional tickets, South Island	309	9,435	9	9
Tourists' tickets, all lines	915	9,286	10	0
Tourists' tickets, North Island	5,566	34,547	5	0
Tourists' tickets, South Island	506	3,132	0	0
Fifty-trip commutation tickets (ordinary)	3,325	2,567	8	9
Fifty-trip commutation tickets (family)	2,017	3,292	18	6
School tickets	27,444	15,249	7	3
Twenty-trip commutation tickets	1,223	917	1	8
Twelve-trip workmen's tickets	53,697	7,883	14	0
Weekly workmen's tickets	148,954	15,140	19	3
All other season tickets	20,756	29,386	11	2
Totals	265,259	147,532	17	1

H. Davidson, Chief Accountant.

RETURN No. 10.

STATEMENT showing CLASSIFICATION of EXPENDITURE on MAINTENANCE of WAY and WORKS for the Year ended 31st March, 1913.

Classification of Work.	Sections.									Total.
	Whangarei-Kawakawa.	Kaihu.	Gisborne.	North Island Main Lines and Branches.	South Island Main Lines and Branches.	Westland.	Westport.	Nelson.	Picton.	
	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
Track-surfacing	3,987 4 7	889 12 1	2,357 1 1	114,122 4 11	114,720 10 1	11,492 17 7	3,150 10 9	3,201 15 9	3,885 15 2	257,807 12 0
Track-renewals	*Cr.* 23 14 8	315 8 0	146 16 10	89,631 16 10	65,319 3 2	7,175 14 5	1,408 18 10	*Cr.* 970 12 7	660 4 8	163,663 15 6
Ballasting	557 5 0	48 7 0	64 16 11	15,701 3 5	8,753 18 2	1,105 12 11	601 10 3	25 4 3	449 15 1	27,307 13 0
Banks, cuttings, ditches, tunnels ..	796 4 8	99 7 6	117 8 0	13,691 17 5	10,577 14 5	2,172 13 9	177 17 5	339 12 7	820 8 0	28,793 3 9
Bridges, culverts, drains	1,105 0 7	90 10 1	443 15 0	42,612 19 1	27,503 1 8	3,241 17 1	1,341 9 9	1,627 15 0	2,173 11 0	80,139 19 3
Fences, gates, cattle-stops, hedges ..	375 8 10	9 18 9	133 1 1	14,621 14 2	9,616 5 5	1,619 6 0	102 15 9	456 5 9	455 12 1	27,390 7 10
Roads, approaches, &c.	95 17 11	4 18 1	44 17 1	5,273 6 2	3,247 11 3	347 6 5	86 16 5	65 18 0	75 19 11	9,242 11 3
Water-services, signals, cranes, appliances	739 2 4	37 5 10	110 1 8	18,839 19 5	13,106 16 9	935 16 6	535 7 10	144 16 3	395 7 10	34,844 14 5
Wharves	546 17 5	23 13 11	0 18 6	1,188 19 3	373 8 4	1,281 0 2	610 18 9	1,044 10 1	1,098 15 5	6,169 1 10
Buildings	1,576 8 2	31 19 11	423 15 4	49,094 2 0	42,659 4 4	3,289 7 9	1,272 7 8	1,056 7 8	465 0 11	99,868 13 9
Miscellaneous	1,206 0 6	98 8 8	197 5 3	13,935 15 9	9,728 4 9	448 17 2	257 6 10	34 12 5	194 16 1	26,101 7 5
General charges	88 5 11	1 6 11	8 3 5	2,423 19 7	1,409 9 5	103 19 6	388 15 0	49 5 4	57 17 5	4,531 2 6
Totals	11,050 1 3	1,650 16 9	4,048 0 2	381,137 18 0	307,015 7 9	33,214 9 3	9,934 15 3	7,075 10 6	10,733 3 7	765,860 2 6
Rate per mile opened	190 10 5	97 2 2	127 3 10	352 14 5	225 7 7	235 11 2	275 19 5	127 9 10	223 12 2	270 12 2

H. DAVIDSON, Chief Accountant.

RETURN No. 11.

STATEMENT showing Number of Passenger Tickets issued at Cheap Excursion Rates for Year ending 31st March, 1913.

Sections.	Schools, Factories, and Friendly Societies.					Holiday Excursions.				Gross Total—School and Holiday Excursions.	
	Schools, Factories, and Friendly Soc's. — Children not exceeding 15 Years of Age.	Schools only. — Senior Scholars over 15 but not exceeding 23 Years of Age, and Teachers.	Schools, Factories, and Friendly Societies. — Adults.	Total.	Revenue.	1st Class.	2nd Class.	Total.	Revenue.	Number of Tickets.	Revenue.
	No.	No.	No.	No.	£ s. d.	No.	No.	No.	£ s. d.		£ s. d.
Whangarei–Kawakawa ...	301	46	143	490	31 3 5	527	6,104	6,631	921 1 5	7,121	952 4 10
Kaihu	268	11	200	479	22 16 4	27	1,211	1,238	127 3 1	1,717	149 19 5
Auckland	4,093	910	3,757	8,760	633 14 7	12,999	151,461	164,460	51,412 13 11	173,220	52,046 8 6
Gisborne	255	78	85	418	16 12 6	322	9,457	9,779	785 14 3	10,197	802 6 9
Wanganui	6,509	1,108	4,562	12,179	871 11 5	12,199	87,253	99,452	31,388 6 6	111,631	32,259 17 11
Wellington–Napier ...	10,069	2,049	7,433	19,551	1,279 2 7	46,730	143,095	189,825	62,480 4 9	209,376	63,759 7 4
Picton	658	64	386	1,108	43 3 3	1,803	10,183	11,986	1,284 7 0	13,094	1,327 10 3
Nelson	1,524	500	209	2,233	87 14 7	1,974	7,934	9,908	1,133 9 11	12,141	1,221 4 6
Westport	364	30	339	733	36 12 6	54	5,745	5,799	600 8 7	6,532	637 1 1
Westland	4,518	377	4,542	9,437	602 19 3	2,831	25,826	28,657	3,607 0 2	38,094	4,209 19 5
Christchurch	17,673	2,336	18,788	38,797	2,853 15 8	33,039	158,935	191,974	48,259 2 4	230,771	51,112 18 0
Dunedin	9,284	1,145	12,370	22,799	1,527 11 5	38,065	111,416	149,481	44,964 5 5	172,280	46,491 16 10
Invercargill	7,524	1,069	8,320	16,913	1,502 11 1	9,160	86,345	95,505	24,648 0 3	112,418	26,150 11 4
Totals 1913 ...	63,040	9,723	61,134	133,897	9,509 8 7	159,730	804,965	964,695	271,611 17 7	1,098,592	281,121 6 2
Totals 1912 ...	62,289	8,924	63,612	134,825	9,702 15 3	135,590	704,883	840,473	206,472 13 1	975,298	216,175 8 4
Increase ...	751	799	...	...	...	24,140	100,082	124,222	65,139 4 6	123,294	64,945 17 10
Decrease ...	...	...	2,478	928	193 6 8	...	...	...	...	...	...
Total, year ending—											
31st March, 1896 ...	63,598	5,949	38,467	108,014	7,246 5 9	50,511	239,164	289,675	50,232 12 11	397,689	57,478 18 8
31st March, 1897 ...	44,610	5,993	33,925	84,528	5,616 2 8	58,464	313,724	372,188	63,439 0 0	456,716	69,055 2 8
31st March, 1898 ...	39,963	5,398	35,064	80,425	5,569 18 1	66,012	383,569	449,581	80,822 8 1	530,006	86,392 6 2
31st March, 1899 ...	45,748	6,192	39,955	91,895	6,215 11 8	70,531	411,747	482,278	84,794 15 6	574,173	91,010 7 2
31st March, 1900 ...	37,839	5,616	31,164	74,619	4,752 3 10	81,528	501,176	582,704	96,154 7 5	657,323	100,906 11 3
31st March, 1901 ...	38,864	5,602	34,550	79,016	5,234 16 8	87,544	541,624	629,168	102,932 10 9	708,184	108,167 7 5
31st March, 1902 ...	42,506	5,736	37,708	85,950	5,466 16 9	95,628	588,813	684,441	136,813 0 1	770,391	142,279 16 10
31st March, 1903 ...	41,540	6,048	41,555	89,143	6,050 11 3	84,448	517,566	602,014	103,279 8 6	691,157	109,329 19 9
31st March, 1904 ...	50,364	6,975	54,344	111,683	7,424 19 7	100,417	594,967	695,384	125,624 4 0	807,067	133,049 3 7
31st March, 1905 ...	52,742	7,359	53,558	113,659	7,490 16 0	100,968	592,485	693,453	130,068 16 9	807,112	137,559 12 9
31st March, 1906 ...	55,478	7,715	57,027	120,220	7,882 16 1	110,823	626,852	737,675	140,939 16 3	857,895	148,822 12 4
31st March, 1907 ...	48,044	7,837	39,783	95,664	6,514 18 4	125,280	731,132	856,412	194,185 2 9	952,076	200,700 1 1
31st March, 1908 ...	51,031	8,163	53,886	113,080	7,604 10 4	113,617	618,518	732,135	141,519 16 11	845,215	149,124 7 3
31st March, 1909 ...	55,199	9,266	52,579	117,044	7,641 5 10	122,312	667,867	790,179	166,471 6 3	907,223	174,112 12 1
31st March, 1910 ...	53,917	7,811	53,677	115,405	7,964 15 7	128,277	735,561	863,838	211,133 6 10	979,243	219,098 2 5
31st March, 1911 ...	66,381	10,799	66,695	143,875	9,488 14 7	107,208	576,251	683,459	155,444 10 11	827,334	164,933 5 6
31st March, 1912 ...	62,289	8,924	63,612	134,825	9,702 15 3	135,590	704,883	840,473	206,472 13 1	975,298	216,175 8 4
31st March, 1913 ...	63,040	9,723	61,134	133,897	9,509 8 7	159,730	804,965	964,695	271,611 17 7	1,098,592	281,121 6 2

UE and EXPENDIT

er- ndise.	Minerals.	Pa	Bales of Wool.	Trucks of Fire-wood.	Timber, Superficial Feet.	Grain.	Merchandise.	Minerals.	Stations.
Ts. c.	Ts. c.					Ts. c.	Ts. c.	Ts. c.	NORTH ISLAND MAIN LINE & BRANCHES—
..	..	119,	..	..	..	..	..	..	Auckland (Pass.).
..	..		..	..	..	..	..	..	„ (Parcels).
754 15	43,215 17		16,851	216	16,158,600	19,373 10	25,928 6	87,985 17	„ (Goods).
..	..		..	..	..	..	..	..	Auckland District (General charges).
248 15	203 6	6,	..	155	6,373,000	1,685 4	874 16	15,604 11	Newmarket.
412 5	17,336 17	2,	..	87⅔	5,146,500	241 6	6,805 17	31,817 16	Mount Eden.
65 10	63,413 5	4,	..	52⅓	745,100	1,244 19	300 3	6,725 15	Avondale.
32 11	619 19	2,	..	24	709,700	1,780 4	2,994 5	16,545 5	Henderson.
66 7	37 5	5,	..	22	286,200	5,307 2	6,726 18	7,394 8	Helensville.
47 11	107 10	2,	..	2	173,200	2,333 1	1,315 17	5,921 7	Wellsford.
35 3	41 12		..	7⅔	453,200	6 9	75 10	4,035 8	Remuera.
10 3	9 3	1,	..	4	165,100	16 9	24 5	2,477 8	Greenlane.
55 1	102 13	2,	..	33	428,800	513 9	84 5	1,403 19	Ellerslie.
57 7	3,586 14	1,	31	13	190,200	4,131 1	278 17	7,285 7	Penrose Junction.
62 19	906 10	1,	3	77⅓	3,785,600	890 17	927 19	6,693 7	Onehunga (Town).
56 13	18,370 9	2	..	5	891,900	11,058 8	20,022 3	10,350 12	„ (Wharf).
36 6	145 17	4,7	20	78	893,200	2,321 18	2,741 16	20,058 3	Otahuhu.
86 18	66 10	3,4	..	17	868,500	3,980 7	1,738 7	5,608 5	Papakura.
97 14	2,156 2	1,6	..	7	302,300	941 4	435 10	1,110 11	Drury.
80 18	103 4	4,7	1	38	1,197,300	6,399 5	2,796 5	8,730 11	Pukekohe.
81 8	22 0	2,1	..	8	241,400	2,353 3	1,268 6	1,470 9	Tuakau.
80 8	10 15	7	..	29	76,400	856 18	334 4	769 4	Pokeno.
12 4	1,444 15	2,5	..	30	544,900	1,562 8	1,299 8	2,006 16	Mercer.
36 18	232,652 4	3,4	..	62	578,200	3,474 1	2,656 10	5,320 3	Huntly.
03 5	1,382 3	1,0	..	9	379,100	1,218 12	586 3	442 16	Taupiri.
12 10	893 13	3,5	..	33	839,600	2,484 17	2,481 13	2,929 13	Ngaruawahia.
21 14	254 14	18,9	7	25⅓	1,003,400	1,610 8	1,311 7	5,165 17	Frankton Junction.
03 8	878 12	9,4	..	143⅓	6,084,800	7,154 19	6,706 0	13,167 18	Hamilton.
06 8	150 3	5,4	..	150⅓	2,029,600	6,336 19	3,375 10	6,378 7	Cambridge.
67 15	2,655 11	3,7	2	299⅓	2,789,500	2,816 4	1,903 15	7,660 12	Morrinsville.
35 13	..	6	..	90	333,200	1,776 1	557 14	640 5	Matamata.
89 11	52 8	2,3	..	48	212,400	6,184 14	3,112 12	2,670 1	Putaruru.
32 16	1,027 19	16,7	..	155⅔	981,700	3,505 10	3,634 10	4,510 17	Rotorua.
00 10	4,367 12	5,2	1	140⅔	1,241,600	2,922 18	1,625 14	5,598 18	Te Aroha.
93 10	932 16	5,0	..	30	8,208,700	296 2	832 17	11,725 15	Paeroa.
69 13	56 1	2,2	..	67	252,700	230 12	355 8	17,143 19	Karangahake.

KAIHU SECTION—									
Dargaville ..	10	4	796 14 6	253	519	9,048	5,486	9 1 6	11 16 0
Kaihu	8	2	330 17 8	85	101	2,333	2,108	1 1 2	1 10 1
District Office ..	..	..	..	..	..	..	141		170 0 0
General charges and expenses	..	..	50 16 0	..	..	..	..	..	..
Totals ..	..	6	1,178 8 2	338	620	11,381	7,735	0 2 8	183 6 1
GISBORNE SECTION—									
Gisborne	12	8	1,576 12 5	4,234	1,600	24,894	12,388	0 0 10	109 8 7
Te Karaka ..	10	6	840 3 9	2,514	1,417	11,973	8,632	8 17 7	11 14 6
District Office ..	..	..	..	..	..	..	7	..	465 0 0
General charges and expenses	..	..	117 13 9	..	..	..	..	..	..
Totals ..	..	14	2,534 9 11	6,748	3,017	36,867	21,027	8 18 5	586 3 1

RETURN No. 12.

STATEMENT of Revenue and Expenditure of each Station for the Year ended 31st March, 1913.

Stations.	Hours open.	No. of Hands employed.	Traffic Expenditure. £ s. d.	Number of Tickets. First-class Single.	First-class Return.	Second-class Single.	Second-class Return.	Total.	Number of Season Tickets.
North Island Main Line & Branches—									
Auckland (Pass.) ..	24	294	21,292 11 10	29,597	30,033	157,860	228,939	446,429	11,604
,, (Parcels)			..	..	..	..	..	..	..
,, (Goods) ..			24,167 4 6	..	..	..	..	..	..
Auckland District (General charges)	..	..	2,028 19 7	..	..	..	..	..	..
Newmarket ..	18	20	2,978 12 7	3,264	5,557	24,473	51,908	85,202	4,722
Mount Eden ..	22	5	938 4 0	937	1,847	18,089	46,791	67,664	2,783
[illegible]									
Taumarunui	24	22	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Waimarino ..	20	2	470 4 8	23	31	426	255	735	24
Ohakune ..	24	22	3,458 13 4	1,224	898	16,227	14,384	32,733	22
Rangataua ..	21	7	906 18 8	219	265	3,062	2,409	5,955	6
[illegible]									
Utiku	22	4	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Mangaweka	22	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	11
[illegible]									
Kai Iwi	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	15
Aramoho	20	12	1,827 9 7	2,481	1,124	9,161	6,365	19,131	32
Wanganui (Pass.) .	20	59	14,895 5 7	11,911	7,770	45,705	31,825	97,211	363
,, (Parcels)				..	..	..	..	..	..
,, (Goods) ..				..	..	..	..	..	..
Wanganui District (General charges)	..	..	2,028 19 4	..	..	..	..	..	..
Fordell	16	4	631 8 2	615	408	3,177	3,317	7,517	65
Turakina	17	4	631 15 4	323	327	3,431	3,082	7,163	40
Greatford ..	21	6	616 14 10	754	676	2,554	2,542	6,526	14
Halcombe ..	22	4	701 13 5	200	489	2,693	6,284	9,666	30
Feilding ..	23	14	2,296 9 5	4,688	3,706	20,559	20,600	49,553	71

Stations.	Outward. Parcels.	Horses.	Carriages.	Dogs.	Drays, &c.	Trucks of Lime, Chaff, &c.	Cattle.	Calves.	Sheep.	Pigs.	Bales of Wool.	Trucks of Firewood.	Timber, Superficial Feet.	Grain. Ts. c.	Merchandise. Ts. c.	Minerals. Ts. c.
Auckland (Pass.)	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
,, (Parcels)	75,058	291	4	1,916	..	..	..	..	..	..	..	..	..	..	..	..
,, (Goods)	..	..	..	..	434	455¼	294	6	425	3,455	20	16	1,648,400	67,701 1	66,754 15	43,215 17
Auckland District (General charges)	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Newmarket	2,753	43	29	844	20	19	1	..	..	18	..	..	252,300	208 8	2,248 15	203 6
Mount Eden	1,255	2	2	163	2	111¾	100	56	278			11	199,900	193 1	[illegible]	[illegible]
[illegible]																
Taumarunui	1,155	60	11	417	8	13	636	5	2,944	11	128	766½	17,222,900	183 13	1,957 5	895 6
Waimarino	943	30	1	102	2	..	313	71	5,050	..	594	848	10,571,300	33 9	628 5	69 6
Ohakune	1,551	50	9	247	6	11	192	2	7,953	22	1,585	347	18,885,800	147 15	317 15	58 19
Rangataua	1,036	3	3	91	3	8	148	1	1,222	[illegible]	49	502	13,449,800	102 12	273 9	141 13
[illegible]																
Utiku	[illegible]	[illegible]	[illegible]	180	[illegible]	[illegible]	[illegible]	[illegible]	11,117	165	1,706	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Mangaweka	1,249	33	7	301	8	14	615	40	29,904	188	2,981	13	420,500	228 11	232 13	1,485 13
[illegible]																
Kai Iwi	[illegible]	11	[illegible]	171	..	12	1,084	[illegible]	30,475	71	2,220	4	2,100	421 14	119 14	8 14
Aramoho	2,709	10	3	257	5	21	129	1	3,874	255	348	36	32,500	657 9	737 15	1,471 13
Wanganui (Pass.)	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
,, (Parcels)	21,172	372	68	1,004	..	..	..	..	..	..	..	..	..	..	..	..
,, (Goods)	..	..	..	..	6	27	2,104	555	35,518	360	298	13	473,100	8,411 15	10,360 14	7,911 11
Wanganui District (General charges)	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Fordell	4,084	79	11	122	6	117	884	2	30,459	61	4,525	1	2,900	1,319 1	177 3	128 8
Turakina	3,259	34	1	117	1	318	1,466	1	15,696	82	1,707	2	1,600	466 10	71 19	235 17
Greatford	934	95	6	126	2	406	144	1	31,738	.	473	5	400	1,301 5	119 6	675 0
Halcombe	791	9	3	67	4	305	55	38	19,510	366	771	19	1,100	536 9	198 13	151 14
Feilding	6,088	421	40	642	21	194	4,182	311	173,061	2,512	9,096	39	66,700	3,882 4	1,414 18	205 7

Stations.	Ordinary Passengers. £ s. d.	Season Tickets. £ s. d.	Parcels, &c. £ s. d.	Luggage, Mails, and Miscellaneous. £ s. d.	Goods. £ s. d.	Miscellaneous. £ s. d.	Rents and Commission. £ s. d.	Total Value forwarded. £ s. d.
Auckland (Pass.)	119,989 0 10	16,631 11 10	..	344 19 6	..	460 9 8	165 11 0	137,591 12 10
,, (Parcels)	..	..	8,371 3 2	3,940 12 5	Cr. 73 11 7	6 8 0	..	12,244 12 0
,, (Goods)	..	..	..	..	137,037 5 10	944 3 1	1,796 14 8	139,778 3 7
Auckland District (General charges)	..	..	..	..	..	..	..	..
Newmarket	6,253 18 2	955 14 6	282 0 7	60 9 7	3,534 1 3	28 10 4	577 9 8	11,692 4 1
Mount Eden	2,810 12 9	586 17 8	82 13 1	[illegible]	2,791 3 3	36 18 6	301 18 0	6,625 10 10
[illegible]								
Taumarunui	16,587 9 3	121 7 0	420 19 7	111 7 7	31,759 2 0	36 6 10	230 14 9	49,267 7 0
Waimarino	179 3 5	12 0 0	96 17 0	0 4 5	24,175 7 8	20 19 7	125 5 6	24,609 17 7
Ohakune	8,571 17 9	2 9 6	251 11 3	59 12 2	35,955 4 2	72 2 6	888 2 1	45,800 19 5
Rangataua	[illegible]	[illegible]	76 17 1	8 7 9	26,006 7 4	240 9 0	24 17 6	[illegible]
[illegible]								
Utiku	[illegible]	4 0 0	73 9 1	0 4 4	7,532 16 4	2 9 11	23 14 0	8,434 14 5
Mangaweka	2,116 7 5	28 10 6	153 13 4	15 8 2	3,236 18 6	11 18 8	25 4 3	5,588 0 10
[illegible]								
Kai Iwi	541 0 7	20 18 0	182 11 2	3 6 9	2,211 12 0	1 0 0	2 10 0	2,962 18 6
Aramoho	5,011 17 0	16 14 0	172 16 9	62 2 3	1,476 0 6	11 0 0	236 2 7	6,986 13 1
Wanganui (Pass.)	26,338 8 2	2,268 8 5	..	172 10 0	Cr. 0 1 0	22 14 6	1,449 11 6	30,251 11 7
,, (Parcels)	..	..	2,445 14 2	342 19 2	Cr. 38 6 7	5 9 1	..	2,755 15 10
,, (Goods)	..	..	..	..	24,986 8 4	4,206 14 11	..	29,193 3 3
Wanganui District (General charges)	..	..	..	..	..	..	..	..
Fordell	1,076 17 10	81 0 8	346 6 2	11 8 3	2,482 15 11	14 5 2	2 10 0	4,015 4 0
Turakina	1,133 18 3	26 4 0	195 18 10	9 5 6	1,928 16 11	1 5 4	.	3,295 8 10
Greatford	1,294 6 0	45 12 6	177 9 8	19 7 3	2,931 1 3	4 10 9	18 0 0	4,490 7 5
Halcombe	1,094 6 11	23 5 8	130 11 1	7 16 6	1,885 7 5	2 9 8	34 4 2	3,178 1 5
Feilding	11,139 5 9	68 11 2	1,036 0 11	164 0 8	13,752 7 3	35 9 0	220 17 6	26,416 12 3

Inward. Parcels.	Horses.	Carriages.	Dogs.	Drays, &c.	Trucks of Lime, Chaff, &c.	Cattle.	Calves.	Sheep.	Pigs.	Bales of Wool.	Trucks of Firewood.	Timber, Superficial Feet.	Grain. Ts. c.	Merchandise. Ts. c.	Minerals. Ts. c.	Stations.
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	North Island Main Line & Branches— Auckland (Pass.).
35,310	226	59	1,524	..	..	..	..	..	..	..	..	..	..	..	..	,, (Parcels).
..	..	..	..	47	2,505	326	36	1,444	9	16,851	216	16,158,600	19,373 10	25,928 6	87,985 17	,, (Goods).
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	Auckland District (General charges).
6,350	42	10	333	6	183	22	..	80	..	..	155	6,373,000	1,685 4	874 16	15,604 11	Newmarket.
1,272	14		85	1	420	2,941	72	4,770	..	..	87¾	5,146,500	241 6	6,805 17	31,817 16	Mount Eden.
																[illegible]
9,083	128	26	488	36	120	2,432	851	28,903	156	..	39½	[illegible]	[illegible]	[illegible]	[illegible]	Taumarunui
4,409	24	3	149	16	107	654	312	7,543	3	..	3	[illegible]	[illegible]	[illegible]	[illegible]	Waimarino
5,037	56	12	243	16	199	758	67	4,994	2	..	3	[illegible]	[illegible]	[illegible]	[illegible]	Ohakune
3,051	22	9	112	1	115	113		[illegible]	16		12	[illegible]	[illegible]	[illegible]	[illegible]	Rangataua
																[illegible]
1,775	14	3	154	3	20	272	64	4,587	23	..	..	42,500	260 19	327 4	669 7	Utiku
2,071	31	14	235	2	16	288	92	4,981	26	..	1	90,600	817 14	854 0	111 14	Mangaweka
																[illegible]
1,121	21	2	171	2	21	133	67	3,037	20	..	38	314,800	560 17	331 11	427 8	Kai Iwi.
6,882	14	2	183	2	34	107	20	2,604	162	..	120	938,000	576 7	289 2	2,247 14	Aramoho.
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	Wanganui (Pass.).
15,135	518	51	965	..	..	..	..	..	..	..	..	..	..	..	..	,, (Parcels).
..	..	..	..	27	449	4,372	197	126,191	161	20,384	490	9,632,200	1,851 0	3,446 6	1,585 16	,, (Goods).
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	Wanganui District (General charges).
1,779	25	5	129	3	20	556	1	5,389	3	..	50	177,700	662 5	500 4	764 17	Fordell.
1,553	12	4	106	6	2	215	10	4,135	1	272	62	239,600	962 18	433 16	367 11	Turakina.
2,091	113	3	92	1	1	346	24	9,101	62	.	66	246,200	596 0	504 13	848 13	Greatford.
3,521	8		73	1		174	148	[illegible]	85	.	4	64,700	527 7	382 17	660 15	Halcombe.
9,059	456	26	585	20	53	1,582	1,419	[illegible]	125	633	85	2,474,600	4,457 7	4,424 17	3,890 17	Feilding.

RETURN No. 12—*continued.*

STATEMENT of REVENUE and EXPENDITURE of each Station for the Year ended 31st March, 1913—*continued.*

Stations.	Hours open.	No. of Hands employed.	Traffic Expenditure.	OUTWARD																														INWARD																Stations.
				Number of Tickets.																																														
				First-class Single.	First-class Return.	Second-class Single.	Second-class Return.	Total.	Number of Season Tickets.	Parcels.	Horses.	Carriages.	Dogs.	Drays, &c.	Trucks of Lime, Chaff, &c.	Cattle.	Calves.	Sheep.	Pigs.	Bales of Wool.	Trucks of Firewood.	Timber, Superficial Feet.	Grain.	Merchandise.	Minerals.	Ordinary Passengers.	Season Tickets.	Parcels, &c.	Luggage, Mails, and Miscellaneous.	Goods.	Miscellaneous.	Rents and Commission.	Total Value forwarded.	Parcels.	Horses.	Carriages.	Dogs.	Drays, &c.	Trucks of Lime, Chaff, &c.	Cattle.	Calves.	Sheep.	Pigs.	Bales of Wool.	Trucks of Firewood.	Timber, Superficial Feet.	Grain.	Merchandise.	Minerals.	
NORTH ISLAND MAIN LINE & BRANCHES—*continued.*			£ s. d.																				Ts. c.	Ts. c.	Ts. c.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.														Ts. c.	Ts. c.	Ts. c.	NORTH ISLAND MAIN LINES AND BRANCHES—*continued.*
Palmerston N. (Pass)	24	105	16,136 12 0	14,077	11,246	85,326	59,891	170,540	511	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	38,551 1 3	2,388 9 11	..	40 10 0	*Cr.* 1 16 8	40 3 4	460 7 6	41,478 15 4	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	PalmerstonN.(Pass.)
„ (Parcels)				..	..	..	..	..	..	25,154	684	122	1,359	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2,863 3 3	778 5 11	*Cr.* 34 12 11	16 10 8	..	3,623 6 11	20,635	551	84	1,214	..	..	..	..	..	..	..	..	..	..	..	..	„ (Parcels).
„ (Goods)				..	..	..	..	..	..	..	..	..	..	94	90	7,512	1,133	45,714	2,068	2,664	44	471,000	7,810 0	6,251 14	5,521 11	..	..	..	..	18,343 4 5	135 3 9	..	18,478 8 2	..	..	..	..	26	398	3,606	510	17,040	1,340	595	879⅓	4,895,800	12,009 15	12,531 8	12,439 17	„ (Goods).
Ashhurst	18	3	574 11 11	504	536	5,758	5,721	12,519	60	2,039	26	5	119	1	29	189	100	20,993	662	2,288	22	193,800	286 9	81 11	466 16	1,468 2 4	28 13 8	271 11 7	17 0 5	1,877 6 2	2 12 3	57 11 3	3,722 17 8	1,390	11	5	81	2	26	259	4	4,158	21	..	18	838,000	654 13	594 10	1,705 7	Ashhurst.
Longburn	22	7	1,107 3 4	470	832	7,710	9,427	18,439	81	2,049	115	5	226	3	906	3,741	300	41,718	2,299	2,150	70⅔	23,800	7,563 17	3,545 11	2,023 1	1,388 0 1	45 4 8	313 9 8	16 12 3	10,174 6 3	*Cr.* 85 0 1	60 4 1	11,912 16 11	1,099	86	4	89	5	11	442	12	41,133	22	130	17	194,800	558 2	853 8	4,383 16	Longburn.
Foxton	12	7	3,008 4 4	965	1,220	13,955	13,605	29,745	116	1,279	89	2	82	5	225	147	77	2,849	12	2,179	7	58,800	3,800 7	10,484 14	9,377 12	3,190 7 8	83 4 2	187 2 0	20 2 8	14,602 10 0	928 14 8	242 15 0	19,254 16 2	5,563	110	9	175	27	993	304	103	7,771	10	8,112	296⅓	1,284,000	5,070 11	3,858 10	9,854 15	Foxton.
Shannon	21	4	616 11 3	476	400	7,368	9,401	17,645	34	3,241	52	3	161	6	20	1,410	272	23,795	1,095	848	5	397,000	6,294 4	472 16	43 19	2,668 1 8	23 9 2	435 8 3	43 19 0	5,153 6 1	4 0 11	3 0 0	8,331 5 1	4,434	40	8	239	17	53	552	222	9,257	255	..	71⅓	471,900	1,629 11	1,262 3	4,161 2	Shannon.
Levin	20	6	983 10 6	1,322	1,705	8,499	8,546	20,072	126	5,561	144	26	261	5	40	1,223	223	22,935	646	874	268	114,400	1,341 11	1,144 1	2,685 5	4,610 12 1	103 5 10	741 11 7	76 9 6	3,489 6 1	26 10 2	7 10 0	9,055 5 3	5,815	74	31	319	20	132	592	179	8,025	369	9	46	610,600	1,875 0	1,767 9	1,564 4	Levin.
Otaki	19	5	768 8 5	1,091	1,044	6,857	6,142	15,134	99	8,198	197	17	217	7	41	2,054	140	23,617	195	944	26	319,600	2,035 13	364 9	55 9	3,081 0 1	54 10 8	1,577 1 0	38 6 8	3,033 18 2	5 10 4	254 7 0	8,044 13 11	7,006	248	20	238	18	35⅔	453	10	5,608	134	..	36	344,500	1,868 2	1,871 5	1,841 10	Otaki.
Paekakariki	20	21	3,301 12 11	1,651	5,770	12,519	30,627	50,567	613	6,818	102	13	115	5	79	907	154	22,354	62	1,267	95	1,486,500	1,139 7	333 17	134 18	4,705 4 10	96 11 9	1,092 12 0	14 13 11	3,077 4 0	10 14 8	632 8 0	9,629 9 2	4,737	48	17	938	8	164	773	46	3,059	131	..	49	494,900	1,290 10	1,178 7	4,026 1	Paekakariki.
Johnsonville	19	5	986 8 7	1,095	5,451	7,114	32,399	46,059	5,987	3,076	74	8	237	5	..	620	8	10,749	17	695	1	26,200	170 17	229 9	17 10	2,830 9 1	1,190 1 4	226 0 3	7 11 0	648 5 7	1 12 1	11 11 0	4,915 10 4	1,920	42	7	287	2	85	8,436	868	64,607	285	..	30	286,000	927 19	460 19	3,129 9	Johnsonville.
Thorndon (Coaching)	As required	79	11,944 0 8	25,810	34,062	73,727	125,410	259,009	6,786	60,911	335	53	2,114	..	..	..	..	..	..	..	..	..	..	..	..	104,600 13 1	12,200 11 7	8,815 9 4	1,746 6 8	*Cr.* 82 10 9	79 13 9	177 10 0	127,537 13 8	34,768	375	41	919	..	..	..	..	..	..	..	..	..	..	..	..	Thorndon (Coaching)
Lambton (Pas'ng'rs	19	58	11,031 8 1	13,005	57,114	54,358	159,723	284,200	11,388	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	25,265 16 5	11,850 6 6	..	937 0 0	..	184 19 3	549 2 0	38,787 4 2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	Lambton (Pass.).
„ (Parcels)				..	..	..	..	..	..	27,574	179	97	656	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2,471 4 9	1,535 19 2	*Cr.* 18 1 2	1 17 1	..	3,990 19 10	27,068	220	15	491	..	..	..	..	..	..	..	..	..	..	..	..	„ (Parcels).
Wellington (Goods)	As required	115	18,265 9 1	..	..	..	..	..	..	..	..	..	..	42	1,140⅓	467	22	1,501	388	366	16	1,765,200	38,922 0	38,082 16	62,309 2	..	..	..	..	118,116 10 3	1,547 15 2	688 17 11	120,353 3 4	..	..	..	..	26	1,039	2,707	59	2,029	239	81,291	764	8,821,800	31,292 12	44,466 15	34,165 6	Wellington (Goods).
„ (Wharf)				..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	11 3	..	110 0	..	..	..	..	15 15 2	..	..	15 15 2	..	..	..	..	..	..	3	..	..	..	..	1	56,800	3,513 4	1,469 6	120 0	„ (Wharf).
Wellington District (General charges)	..	..	2,028 19 9	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	Wellington District (General charges).
Te Aro	14	4	531 17 2	491	10,375	2,542	23,772	37,180	5,325	617	..	..	70	..	..	..	..	..	..	..	..	..	..	..	..	2,666 0 11	716 2 1	35 17 1	26 16 8	*Cr.* 3 1 9	4 9 3	..	3,446 4 3	13,584	..	..	38	..	..	..	..	..	..	..	..	..	..	..	..	Te Aro.
Ngahauranga	19	6	1,247 4 7	410	1,062	5,711	19,596	26,779	1,763	358	10	1	92	1	4	30	..	778	55	..	..	..	1,576 19	12,800 6	469 2	681 4 7	269 7 6	34 8 9	4 13 4	3,171 9 2	1 0 6	..	4,162 3 10	345	7	..	35	..	38	5,215	356	424,124	35,184	55	2	108,900	5 12	197 11	6,262 2	Ngahauranga
Petone	19	13	2,443 12 8	1,850	19,513	16,621	100,212	138,196	24,781	1,004	11	4	146	..	5	136	15	273	..	..	..	11,000	1,672 12	15,979 17	144 11	6,332 13 11	3,795 4 11	121 8 6	77 15 8	4,739 7 8	29 10 0	21 10 0	15,117 10 8	2,401	17	1	125	..	183	3,803	128	559,951	1,275	51	102	2,368,000	1,370 6	172 16	15,885 1	Petone.
Lower Hutt	19	16	2,803 4 11	4,011	20,039	16,941	68,408	109,399	18,993	22,428	249	6	286	..	7	24	1	377	..	100	67	37,600	105 16	297 16	39,749 5	6,143 4 4	4,312 4 1	1,810 2 3	131 13 4	4,457 17 6	8 16 8	30 12 6	16,894 10 8	2,703	156	4	272	2	963⅔	86	23	284	..	..	95	932,200	746 18	276 15	4,277 19	Lower Hutt.
Upper Hutt	As required	17	3,000 11 4	1,229	3,864	9,347	28,428	42,868	1,801	9,134	200	4	167	3	8	350	42	7,499	18	13	111⅔	2,119,400	40 0	258 6	3,707 7	3,270 15 11	465 3 4	1,402 8 2	26 7 11	2,237 5 8	19 6 4	35 10 0	7,456 17 4	2,888	449	3	258	1	139	491	20	2,576	..	..	39	170,300	1,670 6	987 13	2,786 3	Upper Hutt.
Kaitoke	Do.	2	371 7 8	34	116	414	874	1,438	2	1,785	4	1	29	1	4	..	..	3	15	441	118	118,700	6 1	25 19	..	151 2 11	2 0 0	93 10 3	..	321 12 11	0 9 2	229 16 0	798 11 3	922	5	1	30	2	2	3	..	18	..	..	..	50,200	176 1	217 0	834 19	Kaitoke.
Summit	„	3	410 8 2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	Summit.
Cross Creek	„	9	1,497 18 2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	Cross Creek.
Featherston	12	7	1,383 4 8	2,027	2,115	5,605	4,828	14,575	68	5,043	143	6	289	..	112	2,255	161	174,095	3,096	7,188	10	19,500	2,105 17	528 6	..	3,666 4 11	49 11 3	811 17 9	45 17 6	6,840 13 11	50 12 9	74 18 0	11,539 16 1	7,213	203	11	384	8	27	98	154	6,587	212	..	178⅔	635,600	2,387 15	2,719 7	2,606 18	Featherston.
Greytown	13	3	598 14 7	964	1,116	2,901	2,897	7,878	60	1,543	9	2	49	..	90	1	20	7,882	275	303	5	3,100	597 4	157 4	..	1,670 12 2	36 4 6	141 11 1	17 3 8	827 12 2	2 18 0	4 0 0	2,700 1 7	1,783	32	3	29	..	6	15	..	9,055	14	..	1	102,200	548 2	935 10	651 2	Greytown.
Carterton	15	5	884 5 8	1,523	1,465	6,603	4,778	14,369	27	2,394	104	6	167	6	246	1,334	84	133,239	929	5,955	82	26,200	2,106 0	6,171 15	668 17	3,297 3 7	49 8 9	307 17 3	59 7 5	13,297 14 1	19 2 5	53 12 9	17,084 6 3	4,141	88	13	146	1	15	585	6	60,504	1,892	12	5	1,336,700	2,005 0	2,311 2	2,007 17	Carterton.
Masterton	17	25	4,161 4 0	5,711	4,968	20,982	20,683	52,344	242	5,964	267	43	703	13	620	1,915	284	79,223	260	13,459	61	408,800	2,155 3	1,423 8	1,271 16	13,668 12 4	1,103 6 1	985 11 5	196 11 11	10,955 7 6	74 16 9	348 3 2	27,332 9 2	9,716	180	32	571	12	49	685	397	14,869	332	124	36	1,997,700	5,948 7	5,887 13	8,855 10	Masterton.
Mauriceville	16	3	521 3 9	201	259	1,290	2,853	4,603	28	932	19	4	97	1	119	160	1	12,960	455	1,972	10	311,000	761 16	63 11	135 5	679 15 5	36 4 0	94 3 1	10 10 4	1,790 2 8	3 16 10	33 7 10	2,648 0 2	869	40	4	84	1	5	36	16	1,100	147	..	162	52,100	322 19	245 13	74 10	Mauriceville.
Eketahuna	14	5	879 5 7	1,002	1,103	5,086	4,280	11,471	41	1,866	29	6	176	8	3	388	101	39,946	764	5,153	197	716,200	1,044 15	337 5	8 0	2,842 14 1	33 17 3	191 11 6	42 10 1	4,637 12 2	9 14 8	15 5 0	7,773 4 9	3,825	33	12	250	2	75	316	150	2,102	105	..	3	239,400	1,947 8	1,975 17	945 3	Eketahuna.
Hukanui	14	2	405 17 3	133	142	1,965	2,655	4,895	3	622	16	1	58	1	5	156	17	3,079	1,271	220	400	1,075,600	157 6	87 8	85 5	853 17 6	2 1 6	79 4 6	7 16 6	2,091 10 4	2 6 3	25 0 0	3,061 16 7	960	13	5	60	7	65	133	32	764	115	..	2	26,800	427 19	302 8	58 8	Hukanui.
Pahiatua	15	6	1,062 17 11	1,599	1,292	5,938	4,571	13,400	16	1,576	65	13	212	8	4	429	280	63,329	1,758	5,325	129	66,300	1,188 18	460 13	26 4	3,951 3 8	13 5 0	238 18 3	47 17 0	5,443 8 4	22 1 1	72 6 1	9,788 19 5	4,303	47	23	286	13	210	318	12	2,335	276	355	6	429,600	2,327 19	2,147 6	1,165 11	Pahiatua.
Mangatainoka	15	2	449 18 10	196	215	1,507	1,814	3,732	32	624	25	1	67	2	..	41	29	2,694	542	1,177	1	2,200	499 15	959 10	4 0	916 5 9	16 0 0	89 8 5	7 0 9	2,240 16 7	1 6 1	44 14 6	3,315 12 1	786	15	1	32	..	13	161	12	1,020	59	..	5	131,800	500 19	521 16	313 7	Mangatainoka.
Woodville	17	25	4,017 3 7	1,983	1,557	12,927	12,285	28,752	140	4,610	173	13	271	9	108	815	158	25,037	1,016	2,069	741	194,500	907 12	1,119 2	69 17	5,314 12 10	595 1 6	546 5 7	83 10 5	5,021 10 2	51 6 1	629 16 10	12,242 3 5	3,146	296	15	251	2	34	527	50	3,055	9,757	..	43	431,200	1,418 18	1,420 5	1,142 18	Woodville.
Dannevirke	14	16	2,907 0 5	3,790	2,792	17,778	11,820	36,180	449	4,779	209	21	623	23	47	1,482	13	87,713	767	8,083	392	719,700	1,348 17	1,440 5	386 1	9,244 3 2	359 18 6	679 1 6	110 14 10	10,851 14 8	39 5 2	88 5 0	21,373 2 10	8,960	260	32	642	6	214	786	30	5,384	1	197	110⅔	418,900	3,829 7	4,635 15	2,688 18	Dannevirke.
Makotuku	13	3	518 10 2	194	116	2,046	2,829	5,185	119	1,369	9	2	78	1	28	91	45	38,637	..	1,147	585⅓	1,686,400	94 8	83 18	114 0	703 11 7	71 4 0	71 4 1	6 15 1	3,631 0 7	0 14 2	33 15 0	4,518 4 6	952	14	6	71	2	6	513	83	5,041	3	..	2	63,200	235 19	255 15	101 5	Makotuku.
Ormondville	14	4	587 18 4	412	477	3,694	4,657	9,240	59	1,049	10	1	132	1	1	177	..	16,318	351	1,591	31	3,200	382 8	242 18	0 5	1,633 13 0	39 9 8	82 4 11	16 3 1	1,878 14 9	4 18 1	30 1 6	3,685 5 0	5,455	11	12	123	1	18	184	23	621	1	1	17	102,300	751 12	737 18	100 5	Ormondville.
Takapau	15	3	558 18 10	738	766	3,294	3,625	8,423	64	2,561	27	10	230	5	238	417	2	71,590	21	3,440	781⅔	1,117,800	498 11	200 13	3 4	1,890 18 11	36 1 0	158 0 10	19 5 5	5,760 12 10	12 2 11	19 19 6	7,897 1 5	4,196	29	11	236	7	6	224	1	4,435	4	1	22⅔	339,500	1,225 2	895 8	476 16	Takapau.
Waipukurau	16	13	2,093 11 9	3,194	2,458	12,715	14,907	33,274	180	2,909	126	9	442	1	48	2,264	138	127,468	..	6,248	14	202,300	411 14	440 11	120 14	5,479 0 3	73 7 0	297 2 0	58 5 9	5,216 17 5	13 14 11	499 13 0	11,638 0 4	5,075	236	23	367	12	31	710	164	20,004	18	..	420	1,049,500	1,637 3	1,971 9	1,129 0	Waipukurau
Waipawa	14	6	1,009 14 3	1,791	1,687	6,081	6,687	16,246	54	2,505	37	4	262	7	172	328	33	68,715	..	5,102	8	47,700	689 9	457 10	177 18	3,533 0 2	200 18 0	233 12 6	26 17 4	3,056 9 0	10 14 4	21 5 0	7,082 16 4	4,536	31	16	208	6	4	209	3	2,602	..	..	120	351,700	1,828 0	1,696 14	1,247 16	Waipawa.
Otane	13	2	478 6 2	712	710	3,030	4,673	9,125	137	1,519	35	3	142	7	9	799	6	67,196	2	4,182	6	256,700	60 6	249 4	..	1,434 1 1	73 5 2	114 5 10	10 17 5	2,115 4 1	21 3 9	8 0 0	3,776 17 4	3,090	33	5	132	2	20	123	1	2,261	1	..	40	280,300	908 5	954 19	628 3	Otane.
Te Aute	13	2	334 7 6	181	162	1,248	2,119	3,710	53	745	42	1	74	..	43	1,869	100	21,187	11	1,550	8	31,700	641 9	127 5	1,470 18	519 1 5	27 15 6	78 12 1	6 0 1	1,793 15 11	0 3 1	20 10 0	2,445 18 1	1,408	11	6	109	2	13	66	1	958	20	..	37	154,600	967 7	479 16	3,764 8	Te Aute.
Hastings	15	18	3,100 3 3	7,914	14,437	35,374	65,249	122,974	1,087	10,558	763	53	874	11	111⅓	542	2	5,368	5	9,337	25	158,800	6,827 19	7,476 7	1,048 2	17,994 18 10	1,508 16 4	1,819 3 8	253 19 11	11,239 8 11	30 17 6	1,413 10 0	34,260 15 2	8,788	359	31	931	18	395	1,370	209	107,304	11	1,296	1,000⅓	4,845,200	8,121 12	6,198 17	18,268 16	Hastings.
Farndon	16	3	493 11 8	564	1,933	2,907	9,802	15,206	240	840	11	2	44	1	99	57	14	173	..	3,486	2	8,500	899 19	11,137 10	1,257 3	1,075 11 11	115 19 9	77 11 6	13 14 7	4,474 13 9	*Cr.* 90 12 10	2 10 0	5,669 8 8	713	13	1	59	2	9	471	29	135,710	..	361	80	277,800	330 7	254 10	438 1	Farndon.
Napier	17	31	5,631 10 10	10,538	16,661	27,426	57,605	112,230	1,994	15,726	183	54	669	3	126	213	..	98	..	27	16	103,700	1,203 17	3,022 11	3,274 4	27,160 14 6	2,690 10 6	1,730 15 4	386 12 4	5,609 12 1	110 5 3	234 1 0	37,922 11 0	8,923	227	19	902	11	302	280	..	194	..	197	359⅔	3,129,900	982 11	1,470 11	18,656 13	Napier.
Port Ahuriri	As required	8	1,424 19 6	..	..	..	..	..	..	793	4	6	15	8	266	75	4	1,670	8	1,035	16	373,500	11,745 15	9,044 0	32,215 1	..	..	61 9 6	..	18,711 18 11	404 11 5	50 10 0	19,228 9 10	420	11	1	8	3	450⅓	276	4	71,922	..	43,496	505	1,919,400	2,291 5	17,269 5	1,502 13	Port Ahuriri.
Chief Accountant	..	..	..	2,555	..	842	6,220	9,617	1,006	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2,443 13 0	10,205 1 2	..	33,069 9 0	*Cr.* 6 2 0	4,449 4 2	15,306 5 9	65,466 11 1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	Chief Accountant.
Tablet stations	..	146	18,888 2 7	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	Tablet stations.
General expenses	..	..	43,804 18 4	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	General expenses.
Totals	..	1,845	361,026 15 3	256,876	359,113	1,527,770	2,214,325	4,358,084	165,886	593,775	10,588	1,348	31,124	1,454	14,882	135,449	21,052	2,481,179	94,923	183,139	10,501	142,971,200	307,980 5	334,326 14	628,604 10	765,762 4 3	94,856 6 7	68,314 1 11	47,493 15 10	1,003,498 19 8	20,124 1 10	35,947 2 9	2,035,996 12 10	593,775	10,588	1,348	31,124	1,454	14,882	135,449	21,052	2,481,179	94,923	183,139	10,501	142,971,200	307,980 5	334,326 14	628,604 10	Totals.
WHANGAREI-KAWAKAWA SECTION—																																																		WHANGAREI-KAWAKAWA SECTION.
Onerahi	12	7	1,266 2 3	5,351	732	12,831	5,324	24,238	83	181	4	1	178	1	17	25	..	2,266	..	..	1	43,000	2,095 13	3,154 17	297 5	1,007 7 1	33 12 0	24 12 1	2 12 4	2,574 4 5	270 11 11	2 16 3	3,915 16 1	497	15	1	125	..	75	13	..	2	100	..	1	5,923,000	467 17	1,025 6	99,806 12	Onerahi.
Whangarei	13	18	3,581 3 7	8,157	3,255	32,486	19,548	63,446	693	2,350	84	11	265	6	1	236	120	2,911	41	..	2	211,300	637 2	1,472 3	10,084 19	4,822 11 4	286 9 0	209 10 3	67 4 6	2,278 6 1	70 11 9	119 7 6	7,854 0 5	1,031	50	3	191	1	200	288	..	3,030	323	..	51	1,176,400	371 17	1,168 4	2,788 4	Whangarei.
Hikurangi	10	3	505 16 11	593	525	6,079	5,706	12,903	150	936	25	7	66	6	353	332	18	3,069	382	..	250	12,372,000	600 18	396 16	93,851 0	1,014 4 4	73 17 6	65 11 2	4 0 6	20,669 10 7	3 2 7	14 0 0	21,844 6 8	2,316	4	1	103	9	17	35	12	882	9	..	42	930,200	2,197 8	2,975 3	4,012 11	Hikurangi.
Kawakawa	10	3	397 12 9	1,173	322	6,047	2,659	10,201	38	1,902	37	1	101	7	3	94	18	1,266	9	..	39	2,184,300	397 17	693 10	2,275 17	1,035 19 4	16 9 9	149 18 6	5 7 6	1,456 10 0	4 4 6	0 10 0	2,668 19 7	1,283	85	16	215	20	118	357	136	4,291	..	..	201	5,610,100	1,964 7	2,706 3	1,346 14	Kawakawa.
Opua	10	5	698 7 1	1,360	522	7,474	7,492	16,848	1	141	13	1	57	12	36	15	..	2	..	..	3	167,100	1,638 0	2,673 7	1,634 14	1,879 13 0	0 10 0	17 16 9	2 7 10	1,893 7 10	28 16 11	15 15 0	3,837 17 4	383	9	..	33	2	..	9	8	1,309	..	..	..	1,338,000	368 1	515 17	189 14	Opua.
District Office	..	..	..	..	..	..	324	324	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	45 7 0	142 0 2	..	590 0 0	..	*Cr.* 16 2 4	527 19 11	1,289 4 9	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	District Office.
General charges and expenses	..	..	349 6 3	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	General charges and expenses.
Totals	..	36	6,798 8 10	16,634	5,356	64,917	41,053	127,960	966	5,510	163	21	667	32	410	702	156	9,514	432	..	295	14,977,700	5,369 10	8,390 13	108,143 15	9,805 2 1	552 18 5	467 8 9	671 12 8	28,871 18 11	360 15 4	680 8 8	41,410 4 10	5,510	163	21	667	32	410	702	156	9,514	432	..	295	14,977,700	5,369 10	8,390 13	108,143 15	Totals.
KAIHU SECTION—																																																		KAIHU SECTION.
Dargaville	10	4	796 14 6	253	519	9,048	5,486	15,306	3	1,616	40	9	109	7	4	26	3	24	..	..	4	830,600	748 11	948 11	657 11	1,016 15 10	1 10 0	79 1 6	11 16 0	1,202 17 3	97 12 3	4 0 0	2,413 12 10	2,831	20	1	70	6	137	20	3	223	73	259	88	2,110,000	202 9	524 15	145 10	Dargaville.
Kaihu	8	2	330 17 8	85	101	2,333	2,108	4,627	..	2,831	20	1	70	6	137	20	3	223	73	259	88	2,110,000	202 9	524 15	145 10	436 9 7	..	91 1 2	1 10 1	1,211 3 10	16 2 4	80 2 4	1,836 9 4	1,616	40	9	109	7	4	26	3	24	..	..	4	830,600	748 11	948 11	657 11	Kaihu.
District Office	..	..	..	..	..	..	141	141	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	13 6 0	39 17 3	..	170 0 0	..	161 9 0	67 15 2	452 7 5	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	District Office.
General charges and expenses	..	..	50 16 0	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	General charges and expenses.
Totals	..	6	1,178 8 2	338	620	11,381	7,735	20,074	4	4,447	60	10	179	13	141	46	6	247	73	259	92	2,940,600	951 0	1,473 6	803 1	1,466 11 5	41 7 3	170 2 8	183 6 1	2,414 1 1	275 3 7	151 17 6	4,702 9 7	4,447	60	10	179	13	141	46	6	247	73	259	92	2,940,600	951 0	1,473 6	803 1	Totals.
GISBORNE SECTION—																																																		GISBORNE SECTION.
Gisborne	12	8	1,576 12 5	4,234	1,600	24,894	12,388	43,116	82	3,181	57	18	509	17	32	373	18	2,882	53	..	36	571,600	4,281 7	2,516 16	2,046 9	3,531 17 3	84 2 6	200 0 10	109 8 7	4,358 11 6	556 0 6	157 10 0	8,997 11 2	4,430	40	3	224	14	187	310	38	68,639	669	10,836	180	1,367,000	487 11	433 12	20,769 0	Gisborne.
Te Karaka	10	6	840 3 9	2,514	1,417	11,973	8,632	24,536	14	4,430	40	3	224	14	187	310	38	68,639	669	10,836	180	1,367,000	487 11	433 12	20,769 0	3,050 10 3	9 0 0	178 17 7	11 14 6	5,236 18 7	1 11 4	11 17 6	8,500 9 9	3,181	57	18	509	17	32	373	18	2,882	53	..	36	571,600	4,281 7	2,516 16	2,046 9	Te Karaka.
District Office	..	..	..	..	..	..	7	7	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	25 0 0	90 6 1	..	465 0 0	..	106 13 2	337 17 10	1,024 17 1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	District Office.
General charges and expenses	..	..	117 13 9	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	General charges and expenses.
Totals	..	14	2,534 9 11	6,748	3,017	36,867	21,027	67,659	98	7,611	97	21	733	31	219	683	56	71,521	722	10,836	216	1,938,600	4,768 18	2,950 8	22,815 9	6,607 7 6	183 8 7	378 18 5	586 3 1	9,595 10 1	664 5 0	507 5 4	18,522 18 0	7,611	97	21	733	31	219	683	56	71,521	722	10,836	216	1,938,600	4,768 18	2,950 8	22,815 9	Totals.

INWARD.

Sheep.	Pigs.	Bales of Wool.	Trucks of Fire-wood.	Timber, Superficial Feet.	Grain.		Merchandise.		Minerals.		Stations.
					Ts.	c.	Ts.	c.	Ts.	c.	NORTH ISLAND MAIN LINES AND BRANCHES—*continued.*
..	..	..	..	..	..		..		..		PalmerstonN.(Pass.)
..	..	..	..	..	..		..		..		„ (Parcels).
17,040	1,340	595	879⅓	4,895,800	12,009	15	12,531	8	12,439	17	„ (Goods).
4,158	21	..	18	838,000	654	13	594	10	1,705	7	Ashhurst.
41,133	22	130	17	194,800	558	2	853	8	4,383	16	Longburn.
7,771	10	8,112	296⅓	1,284,000	5,070	11	3,858	10	9,854	15	Foxton.
9,257	255	..	71⅓	471,900	1,629	11	1,262	3	4,161	2	Shannon.
8,025	369	9	46	610,600	1,875	0	1,767	9	1,564	4	Levin.
5,608	134	..	36	344,500	1,868	2	1,871	5	1,841	10	Otaki.
3,059	131	..	49	494,900	1,290	10	1,178	7	4,026	1	Paekakariki.
64,607	285	..	30	286,000	927	19	460	19	3,129	9	Johnsonville.
..	..	..	..	..	..		..		..		Thorndon (Coaching)
..	..	..	..	..	..		..		..		Lambton (Pass.).
..	..	..	..	..	..		..		..		„ (Parcels).
2,029	239	81,291	764	8,821,800	31,292	12	44,466	15	34,165	6	Wellington (Goods).
..	..	..	1	56,800	3,513	4	1,469	6	120	0	„ (Wharf).
..	..	..	..	..	..		..		..		Wellington District (General charges).
..	..	..	..	..	..		..		..		Te Aro.
424,124	35,184	55	2	108,900	5	12	197	11	6,262	2	Ngahauranga.
559,951	1,275	51	102	2,368,000	1,370	6	172	16	15,885	1	Petone.
284	..	..	95	932,200	746	18	276	15	4,277	19	Lower Hutt.
2,576	..	..	39	170,300	1,670	6	987	13	2,786	3	Upper Hutt.
18	..	..	..	50,200	176	1	217	0	834	19	Kaitoke.
..	..	..	..	..	..		..		..		Summit.
..	..	..	..	..	..		..		..		Cross Creek.
6,587	212	..	178⅔	635,600	2,387	15	2,719	7	2,606	18	Featherston.
9,055	14	..	1	102,200	548	2	935	10	651	2	Greytown.
60,504	1,892	12	5	1,336,700	2,005	0	2,311	2	2,007	17	Carterton.
14,869	332	124	36	1,997,700	5,948	7	5,887	13	8,855	10	Masterton.
1,100	147	..	162	52,100	322	19	245	13	74	10	Mauriceville.
2,102	105	..	3	239,400	1,947	8	1,975	17	945	3	Eketahuna.
764	115	..	2	26,800	427	19	302	8	58	8	Hukanui.
2,335	276	355	6	429,600	2,327	19	2,147	6	1,165	11	Pahiatua.
1,020	59	..	5	131,800	500	19	521	16	313	7	Mangatainoka.
3,055	9,757	..	43	431,200	1,418	18	1,420	5	1,142	18	Woodville.
5,384	1	197	110⅔	418,900	3,829	7	4,635	15	2,688	18	Dannevirke.
5,041	3	..	2	63,200	235	19	255	15	101	5	Makotuku.
621	1	1	17	102,300	751	12	737	18	100	5	Ormondville.
4,435	4	1	22⅔	339,500	1,225	2	895	8	476	16	Takapau.
20,004	18	..	420	1,049,500	1,637	3	1,971	9	1,129	0	Waipukurau.
2,602	..	..	120	351,700	1,828	0	1,696	14	1,247	16	Waipawa.
2,261	1	..	40	280,300	908	5	954	19	628	3	Otane.
958	20	..	37	154,600	967	7	479	16	3,764	8	Te Aute.
107,304	11	1,296	1,000⅓	4,845,200	8,121	12	6,198	17	18,268	16	Hastings.
135,710	..	361	80	277,800	330	7	254	10	438	1	Farndon.
194	..	197	359⅔	3,129,900	982	11	1,470	11	18,656	13	Napier.
71,922	..	43,496	505	1,919,400	2,291	5	17,269	5	1,502	13	Port Ahuriri.
..	..	..	..	..	..		..		..		Chief Accountant.
..	..	..	..	..	..		..		..		Tablet stations.
..	..	..	..	..	..		..		..		General expenses.
2,481,179	94,923	183,139	10,501	142,971,200	307,980	5	334,326	14	628,604	10	Totals.
											WHANGAREI-KAWAKAWA SECTION.
2	100	..	1	5,923,000	467	17	1,025	6	99,806	12	Onerahi.
3,030	323	..	51	1,176,400	371	17	1,168	4	2,788	4	Whangarei.
882	9	..	42	930,200	2,197	8	2,975	3	4,012	11	Hikurangi.
4,291	..	..	201	5,610,100	1,964	7	2,706	3	1,346	14	Kawakawa.
1,309	..	..	..	1,338,000	368	1	515	17	189	14	Opua.
..	..	..	..	..	..		..		..		District Office.
..	..	..	..	..	..		..		..		General charges and expenses.
9,514	432	..	295	14,977,700	5,369	10	8,390	13	108,143	15	Totals.

RETURN No

d EXPENDITURE of each

inerals.	Ordinary Passengers.	S Ti	of	Trucks of Fire-wood.	Timber, Superficial Feet.	Grain.	Merchan-dise.	Minerals.	Stations.
Ts. c.	£ s. d.	£					Ts. c.	Ts. c.	SOUTH ISLAND MAIN LINES & BRANCHES—
..	13,413 19 11	2,1		..	..	..	..	..	Lyttelton (Coaching)
7,100 3	..		40	69	1,758,600	132,474 15	64,493 9	11,205 9	„ (Goods).
7,395 19	..		11	..	165,900	42,043 3	12,982 13	95 9	„ Wharf.
115 12	803 15 8	4		3	53,700	2,985 8	491 9	2,465 8	Heathcote.
2,647 12	375 6 0	2	25	6	132,400	1,128 8	6,730 6	7,405 17	Woolston.
..	415 6 0	3		..	..	3 11	2 8	5 5	Opawa.
..	84,473 19 0	9,0		..	..	..	..	..	Christchurch (Pass.).
..	..			..	..	..	..	..	„ (Parcels).
4,911 0	..		93	406⅓	19,710,100	30,451 4	105,066 2	121,859 8	„ (Goods).
..	..			..	..	..	..	..	Christchurch District (General charges).
			86	42	5,776,000	34,768 3	1,173 19	13,704 16	Addington.

Brunner	16	3	635 1 4	146	291	2,232	
Stillwater ..	16	3	524 6 6	225	219	3,174	
Ngahere	15	3	494 0 2	222	393	3,503	
Blackball ..	15	4	716 6 8	122	241	3,194	
Ahaura	13	1	227 13 3	198	149	1,683	
Totara Flat ..	...	..	134 5 3	31	20	425	
Ikamatua ..	14	2	283 11 6	106	125	902	
Reefton	17	5	940 0 5	1,660	960	5,866	
Moana	12	2	348 1 1	141	79	2,509	
Otira	15	2	471 4 9	1,121	479	2,324	
Chief Accountant ..	..	..	..	..	..	..	
Through traffic (S.I.M.L. & B.)	..	..	..	142	133	263	
General charges and expenses	..	..	3,205 4 10	..	..	..	
Totals ..	..	103	27,540 16 2	14,155	14,143	109,957	12
WESTPORT SECTION—							
Westport ..	24	38	13,726 3 6	330	472	13,244	16
Waimangaroa Jn. ..	13	6	1,019 18 2	71	185	5,730	7
Granity	14	7	1,151 14 1	153	217	9,189	14
District Office ..	..	..	..	..	..	192	
Tablet stations ..	..	4	595 8 7	..	..	..	
General charges and expenses	..	..	3,065 9 1	..	..	..	
Totals ..	..	55	19,558 13 5	554	874	28,355	38
NELSON SECTION—							
Port	9	25	4,632 8 9	..	..	..	
Nelson	11	12	1,733 8 11	1,660	2,988	21,859	18
Wakefield ..	11	1	230 7 9	162	159	3,414	4
Belgrove ..	11	4	705 9 7	364	445	9,437	10
Kohatu	9	1	295 12 6	121	114	929	
Glenhope ..	10	4	465 15 10	287	97	3,210	3
District Office ..	..	..	..	..	..	..	
General charges and expenses	..	..	699 13 6	..	..	..	
Totals ..	..	47	8,762 16 10	2,594	3,803	38,849	37
PICTON SECTION—							
Picton	15	14	3,843 15 2	3,779	6,911	12,044	17
Blenheim ..	13	7	1,339 14 9	4,145	6,909	11,817	15
Ward	10	3	589 4 5	868	966	4,120	6
District Office ..	..	..	..	..	..	..	
General charges and expenses	..	..	530 2 8	..	..	..	
Totals ..	..	24	6,302 17 0	8,792	14,786	27,981	40
LAKE WAKATIPU STEAMERS—							
Totals ..	..	..	..	1,968	6,363	3,183	3

60 3 1	13 15 0	
82 15 9	34 6 5	
14 6 5	32 3 5	
62 18 4	45 17 5	
34 8 10	12 14 0	
17 0 0	40 2 0	
7 6 8	20 0 2	
2 8 6	37 9 2	
23 10 6	138 11 0	
9 11 0	94 8 9	
..	135 13 0	
91 15 7	..	2,0
..	..	
..	..	
03 0 5	2,136 18 9	2,7
06 14 9	211 18 2	
89 12 0	81 5 2	
67 16 6	42 7 11	
93 6 3	..	54
..	..	
..	..	
57 9 6	335 11 3	65
..	3 16 0	
31 11 6	238 12 11	15
66 19 9	47 1 4	1
35 10 0	18 0 9	
18 5 0	45 10 11	
3 0 0	20 16 5	1
07 9 7	..	75
..	..	
62 15 10	373 18 4	95
82 19 0	107 8 1	3
65 3 0	261 2 7	7
3 0 0	79 10 1	1
61 9 7	..	72
..	..	
12 11 7	448 0 9	84
47 10 11	282 16 2	56

RETURN No. 12—*continued.*

STATEMENT of Revenue and Expenditure of each Station for the Year ended 31st March, 1913—*continued.*

OUTWARD.

Stations.	Hours open.	No. of Hands employed.	Traffic Expenditure.	Number of Tickets. First-class Single.	First-class Return.	Second-class Single.	Second-class Return.	Total.	Number of Season Tickets.	Parcels.	Horses.	Carriages.	Dogs.	Drays, &c.	Trucks of Lime, Chaff, &c.	Cattle.	Calves.	Sheep.	Pigs.	Bales of Wool.	Trucks of Fire-wood.	Timber, Superficial Feet.	Grain.	Merchandise.
South Island Main Lines & Branches—			£ s. d.																				Ts. c.	Ts. c.
Lyttelton (Coaching)	18	89	3,832 9 11	31,312	41,869	48,008	91,159	212,348	8,151	3,952	355	..	698	..	..	..	..	..	..	..	..	..	..	..
,, (Goods)	As required		30,835 19 0	..	..	..	..	..	..	..	..	..	..	70	39⅓	2,361	42	7,683	1,007	108,514	113⅓	31,412,000	68,536 13	127,347 7
,, Wharf			..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2,437	..	1,566,900	2,682 1	12,409 16
Heathcote	18	4	671 11 6	822	2,680	3,230	19,182	25,914	2,284	758	..	..	108	..	17	..	2	..	..	..	..	4,400	2,038 1	45 1
Woolston	18	5	946 3 10	337	505	1,693	8,036	10,571	1,346	1,484	3	..	14	2	1	8	3	1	65	9,210	28	..	430 10	2,890 9
Opawa	11	1	176 12 6	612	966	2,079	4,192	7,849	2,090	300	..	..	37	..	..	..	..	..	..	..	..	..	2 2	1 6

INWARD.

Total Value Forwarded.	Parcels.	Horses.	Carriages.	Dogs.	Drays, &c.	Trucks of Lime, Chaff, &c.	Cattle.	Calves.	Sheep.	Pigs.	Bales of Wool.	Trucks of Fire-wood.	Timber, Superficial Feet.	Grain.	Merchandise.	Minerals.	Stations.
[illegible] 18 1	452	3	1	12	.	518⅔	.		62	.	1,782	36	144,300	3,471 3	408 9	5,455 5	Green Island.
5,358 18 8	365	1		44		1	.		.	.	3	19	126,000	40 18	69 11	487 2	Abbotsford.
3,323 14 9	1,632	188	2	72	2	12	254	3	3,475	1		8	47,000	243 0	153 0	1,165 12	Wingatui.
2,820 6 7	4,185	67	30	220	31		714	68	4,893	.		31	119,100	714 10	746 3	1,856 14	Middlemarch.
2,736 14 3	2,160	12	3	52	6	1	8	1	3,261			10	44,700	212 13	230 0	951 2	Hyde.
3,066 9 4	5,083	55	18	206	24	5	114	1	2,221	.		21	217,400	925 16	1,245 18	2,383 3	Ranfurly.
3,282 6 11	2,218	14	6	99	4	4	79	40	3,046	..	2	8	46,400	267 4	465 8	82 15	Oturehua.
2,477 11 6	3,072	40	7	121	15	21	99		1,203	..	215	6	250,400	743 10	834 6	1,331 15	Omakau.
2,210 4 9	2,729	20	8	66	3	85	114		1,702	.	.	4	89,200	367 19	1,079 0	959 17	Alexandra
6,251 0 0	3,052	35	11	112	16	56	49	1	2,014			12	277,000	697 4	2,076 8	456 14	Clyde.
9,648 3 4	4,304	216	4	179	10	23	930	2	2,197	16	221	10	286,100	3,005 9	1,104 17	443 17	Mosgiel
1,767 10 4	2,741	42	2	70	10	53⅓	302	37	3,605	10	1,757	19	303,100	1,809 9	942 18	5,508 7	Outram.
2,039 15 8	1,134	62	.	57	3	20	498	.	4,259	2	2	13	111,000	545 8	182 17	3,532 16	Allanton

RETURN No. 12—*continued.*

STATEMENT of REVENUE and EXPENDITURE of each Station for the Year ended 31st March, 1913—*continued.*

OUTWARD.

Stations.	Hours open.	No. of Hands employed.	Traffic Expenditure.	Number of Tickets. First-class Single.	First-class Return.	Second-class Single.	Second-class Return.	Total.	Number of Season Tickets.	Parcels.	Horses.	Carriages.	Dogs.	Drays, &c.	Trucks of Lime, Chaff, &c.	Cattle.	Calves.	Sheep.	Pigs.	Bales of Wool.	Trucks of Firewood.	Timber, Superficial Feet.	Grain.	Merchandise.	Minerals.	Ordinary Passengers.	Season Tickets.	Parcels, &c.	Luggage, Mails and Miscellaneous.	Goods.	Miscellaneous.	Rent and Commission.	Total Value forwarded.
SOUTH ISLAND MAIN LINES & BRANCHES—*continued.*			£ s. d.																				Ts. c.	Ts. c.	Ts. c.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
Henley	20	2	330 18 1	105	203	1,374	3,017	4,699	16	690	55	3	66	4	50	410	68	4,269	74	364	3	6,100	1,249 2	165 7	35 19	457 3 10	9 3 8	87 14 1	6 15 10	659 3 [illegible]	12 [illegible] 2		1,232 6 3
Waihola	20	2	366 19 2	202	111	845	1,143	2,301	8	582	3	1	45	2	23	57	..	2,292	..	186	..	..	334 8	54 0	6,519 2	[illegible] 6 1	7 3 0	34 2 10	3 [illegible] 11	1,418 13 [illegible]	1 11 9	0 10 0	1,720 13 0
Milburn	21	2	369 3 6	23	108	1,041	[illegible]	2,397	11	305	10		[illegible]		1,088	60	1	[illegible]	21	[illegible]	1	[illegible]	[illegible]	[illegible]	[illegible]	279 10 [illegible]	7 17 9	20 14 0	3 7 3	2,048 0 11	[illegible] 17 10		[illegible]
PICTON SECTION—																																	
Picton.	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible],025 12	3,685 11 9	182 19 0	107 8 1	34 1 11	7,299 16 0	1,393 0 8	67 8 0	12,770 5 5
Blenheim.	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	1	434,400	10,650 1	2,624 0	637 8	1,180 17 3	165 3 0	261 2 7	78 4 0	7,503 14 8	134 13 2	413 5 4	12,737 0 0
Ward.	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	6	3,400	3,018 9	184 11	20 10	1,887 7 10	3 0 0	79 10 1	12 0 5	1,904 19 10	0 2 9	..	3,887 0 11
District Office.			[illegible]																		..	..	..	..	..	37 11 0	161 9 7	..	720 0 0	..	766 3 3	312 6 10	1,997 10 8
General charges and expenses.			[illegible]																			..	..	..	..	..	..	..	..	..	..	..	..
Totals.	2[illegible]		[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	1,090	[illegible]	[illegible]	450	424	[illegible]	[illegible]	[illegible]	6	1,078,800	17,079 11	7,823 14	9,683 10	9,791 7 10	512 11 7	148 0 9	844 6 4	16,708 10 6	2,293 19 10	793 0 2	31,391 17 0
LAKE WAKATIPU STEAMERS— Totals.			[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	29	7,146	140	32	166		31	177	1	8,044		2,614	5	265,900	1,672 12	1,950 9	1,431 15	3,137 16 9	447 10 11	282 16 2	563 10 0	2,559 6 10	*Cr.* 0 15 7	30 10 0	7,020 15 1

INWARD.

Parcels.	Horses.	Carriages.	Dogs.	Drays, &c.	Trucks of Lime, Chaff, &c.	Cattle.	Calves.	Sheep.	Pigs.	Bales of Wool.	Trucks of Firewood.	Timber, Superficial Feet.	Grain.	Merchandise.	Minerals.	Stations.
													Ts. c.	Ts. c.	Ts. c.	SOUTH ISLAND MAIN LINES & BRANCHES—*continued.*
2,514	12	8	93	4	12	890	42	4,076			5	165,900	888 18	421 2	2,645 17	Henley.
1,152	7	1	[illegible]	3	1	87	1	[illegible]	1		121	7,500	279 17	107 7	916 8	Waihola.
936	8	3	42	1	6	95	16	2,503	[illegible]		53	19,400	419 4	250 [illegible]	8,407 8	Milburn.
																PICTON SECTION—
1,663	79	3	275	12	2,617	56	8	65,194	21	10,015	8	8,200	8,978 14	1,441 15	519 12	Picton.
1,564	149	11	417	5	689	218	2	7,198	96	5,069	166	604,700	6,254 13	5,119 19	7,906 8	Blenheim.
2,168	99	12	398	18	12	176	414	8,127	9	1	52	465,900	1,846 4	1,262 0	1,257 10	Ward.
..									..	..	..	..	..	..	..	District Office.
..									..	..	..	..	..	..	..	General charges and expenses.
5,395	327	26	1,090	35	3,318	450	424	80,519	126	15,085	226	1,078,800	17,079 11	7,823 14	9,683 10	Totals.
7,146	140	32	166	7	31	177	1	8,044	..	2,614	5	265,900	1,672 12	1,950 9	1,431 15	LAKE WAKATIPU STEAMERS— Totals.

INWARD.										
e.	Calves.	Sheep.	Pigs.	Bales of Wool.	Trucks of Fire-wood.	Timber, Superficial Feet.	Grain.	Merchandise.	Minerals.	Stations.
							Ts. c.	Ts. c.	Ts. c.	South Island Main Lines & Branches—*continued.*
90	42	4,076	..	..	5	163,900	888 18	421 2	2,635 17	Henley.
87	1	1,305	1	..	121	7,500	279 17	107 7	916 8	Waihola.
95	16	2,503	30	..	53	49,400	419 4	250 9	8,497 8	Milburn.
	..	..	..	..	..	..	..	..	..	Milton (Coaching).
01	1	7,910	25	1,369	33	566,600	3,438 6	1,780 8	4,535 19	„ (Goods).
87	1	2,428	8	..	7	73,000	1,041 19	417 11	2,485 8	Waitahuna.
	..	..	..	..	..	..	..	..	..	Lawrence (Coach.).
30	1	1,816	72	..	19	263,500	2,592 9	2,218 18	4,199 3	„ (Goods).
17	18	1,491	..	..	14	132,200	658 14	193 12	1,917 5	Lovell's Flat.
18	..	832	424	2	177	447,200	1,279 9	1,193 2	1,056 18	Stirling.
	..	..	..	..	..	..	..	..	..	Balclutha (Coach.)
59	34	25,778	10	7	150	1,458,700	4,782 18	4,096 16	10,874 1	„ (Goods).
48	83	5,907	16	..	19	123,800	1,611 17	557 3	2,361 7	Waiwera.
62	..	3,536	..	1	28	155,300	946 2	454 6	2,496 18	Clinton.
69	26	1,119	..	..	21	141,400	756 10	227 1	1,107 16	Waipahi.
51	..	352	38	1	15	275,500	1,051 2	638 17	1,596 7	Tapanui.
97	5	2,295	1	..	16	128,700	789 17	316 0	2,032 0	Kelso.
19	143	3,729	..	1	54⅓	406,800	1,335 3	1,140 18	2,298 6	Heriot.
67	..	622	26	..	41	357,700	2,220 8	685 11	1,701 9	Pukerau.
	..	..	..	..	..	..	..	..	..	Gore (Coaching).
29	24	4,302	63	3,734	144	1,710,700	13,578 2	4,666 0	5,528 13	„ (Goods).
10	..	5,023	75	..	71	212,000	1,871 9	840 10	3,398 0	Riversdale.
86	3	597	..	..	4	123,400	1,272 11	670 11	1,960 2	Switzers.
32	2	486	..	1	65⅓	208,700	1,574 12	552 4	1,748 0	Balfour.
09	86	51,361	..	18	62	866,200	2,840 19	3,015 1	2,339 13	Mataura.
87	33	3,083	29	..	46	340,200	2,031 11	766 13	7,572 9	Edendale.
00	..	580	2	..	30	263,300	2,136 10	1,188 0	4,733 18	Wyndham.
94	2	9,634	..	124	42	217,700	2,102 17	893 19	5,430 17	Woodlands.
	..	..	..	..	..	..	..	..	..	Invercargill (Pass.)
	..	..	..	..	..	..	..	..	..	„ (Parcels)
25	107	19,471	181	17,550	709⅓	8,001,900	30,641 10	30,653 11	69,464 15	„ (Goods).
	..	..	..	..	..	..	..	..	..	Invercargill District (General charges).
44	73	1,945	74	..	58	442,700	2,608 15	1,257 1	10,137 15	Waimahaka.
	..	..	..	..	..	..	..	..	..	Bluff (Coaching).
66	5	128,112	25	33,109	19	1,763,900	63,541 17	18,094 0	11,563 2	„ (Goods).
	..	..	..	30,389	..	1,600	23,327 19	4,064 6	1,810 15	„ Wharf.
49	43	64,521	147	69	54	461,400	1,919 6	1,165 15	9,672 19	Makarewa.
40	20	367	28	..	29	139,800	1,824 7	497 10	2,478 17	Thornbury.
24	20	592	..	..	96	475,200	891 10	719 19	1,888 1	Riverton.
95	17	3,572	..	..	110	66,800	873 10	990 5	1,759 10	Orepuki.
99	152	1,139	..	..	3	45,600	919 11	712 13	463 3	Tuatapere.
64	..	1,050	..	..	7	21,300	742 4	246 3	1,775 11	Fairfax.
90	..	1,073	..	..	20	146,000	1,678 10	1,413 4	3,100 15	Otautau.
52	..	252	..	..	110	478,800	1,645 14	1,100 15	1,992 10	Nightcaps.
14	31	2,686	1	..	20	514,300	3,347 18	2,185 19	6,859 2	Winton.
92	35	1,512	1	..	1	106,600	1,376 15	483 3	2,053 12	Centre Bush.
89	1	495	..	..	50	261,600	890 12	524 17	1,561 19	Dipton.
68	24	1,477	1	1	35⅔	344,500	1,507 10	972 17	2,139 12	Lumsden.
67	1	2,653	3	..	23	167,100	894 5	809 8	1,213 15	Kingston.
27	..	4,305	..	2,612	5	220,300	1,570 4	1,536 4	1,347 9	Through traffic (Lake Wakatipu).
	..	..	..	..	..	..	..	..	..	Through traffic (Westland).
	..	..	..	..	..	..	..	..	..	Chief Accountant.
	..	..	..	..	..	..	..	..	..	Tablet stations.
	..	..	..	..	..	..	..	..	..	General expenses.
24	3,838	2,699,910	39,789	521,937	4,871⅓	88,602,900	822,217 3	455,724 2	767,076 2	Totals.
										Westland Section—
88	16	7	..	..	17	68,500	718 5	817 13	869 8	Ross.
02	18	1,386	13	134	57	153,600	231 16	7,909 14	6,854 11	Hokitika.
82	23	1,791	..	..	11	63,700	1,013 10	1,019 7	1,519 0	Kumara.
	..	..	..	..	..	..	..	..	..	Greymouth (Coach).
05	146	11,230	9	1,139	191	55,172,500	407 3	1,725 2	382,049 18	„ (Goods).
	..	..	..	..	..	..	..	..	..	Greymouth District Office.

RETURN No. 13.

STATEMENT OF CARRIAGE AND WAGON STOCK, AND TARPAULINS, FOR THE YEAR ENDING 31ST MARCH, 1913.

Description.	Class.	Whangarei.	Kaihu.	North Island Main Line and Branches.	Gisborne.	South Island Main Line and Branches.	Westland.	Westport.	Nelson.	Picton.	Total.
CARRIAGES.											
Sleepers, bogie, 50 ft.	AA	..	..	10	..	..	..	..	..	..	10
First-class day-cars, bogie, 50 ft.	AA	..	..	22	..	..	..	..	..	..	22
Second-class cars, bogie, 50 ft.	AA	..	..	31	..	..	..	..	..	..	31
Refreshment-cars, bogie, 50 ft.	AA	..	..	8	..	..	..	..	..	..	8
Royal saloon, bogie, 50 ft.	AA	..	..	2	..	..	..	..	..	..	2
,, ,, 44 ft.	A	..	..	..	..	1	..	..	..	..	1
Gallery-cars, bogie, 44 ft.	A	..	..	..	..	5	..	..	..	..	5
Saloon, bogie, 44 ft.	A	..	..	..	..	1	..	..	..	..	1
,, ,, 41 ft.	A	..	..	5	..	4	..	..	..	..	9
,, ,, 39½ ft.	A	..	..	7	..	7	..	..	..	..	14
,, ,, 37½ ft.	A	..	..	2	..	..	..	..	..	..	2
,, ,, 35 ft.	A	..	..	1	..	..	2	..	..	..	3
Refreshment-cars, bogie, 54½ ft.	A	..	..	1	..	..	..	..	..	..	1
,, ,, 47½ ft.	A	..	..	..	..	6	..	..	..	..	6
,, ,, 44 ft.	A	..	..	4	..	1	..	..	..	..	5
Motor-train cars, bogie, 60 ft.	A	..	..	4	..	1	..	..	..	..	5
First-class, bogie, 50 ft.	A	..	..	26	..	..	..	..	..	..	26
,, ,, 47½ ft.	A	..	..	47	..	43	..	..	..	1	91
,, ,, 44 ft.	A	..	..	2	..	..	..	..	..	..	2
,, ,, 43 ft.	A	..	..	11	..	..	..	..	..	..	11
,, ,, 30 ft.	B	..	..	1	..	6	..	..	..	..	7
,, 6-wheel	C	..	..	..	..	2	..	..	..	..	2
,, 4-wheel	D	2	..	..	..	1	..	..	..	..	3
Composite, bogie, 60 ft.	A	..	..	6	..	..	..	..	..	..	6
,, ,, 50 ft.	A	..	..	13	..	1	..	..	..	..	14
,, ,, 47½ ft.	A	..	..	99	2	82	8	1	2	2	196
,, ,, 46 ft.	A	..	..	..	..	8	..	..	..	..	8
,, ,, 44 ft.	A	4	..	80	..	85	8	2	2	3	184
,, ,, 43 ft.	A	..	..	8	..	..	..	..	..	..	8
,, ,, 42½ ft.	A	..	..	13	..	30	..	..	..	..	43
,, ,, 39½ ft.	A	..	..	4	..	4	..	1	2	1	12
,, ,, 30 ft.	B	..	..	19	..	20	..	..	..	..	39
,, 6-wheel	C	4	2	..	3	5	2	..	..	..	16
,, 4-wheel	D	2	..	..	..	..	..	..	..	..	2
Second-class, bogie, 50 ft.	A	..	..	34	..	1	..	..	..	..	35
,, ,, 47½ ft.	A	..	..	72	..	53	3	1	..	..	129
,, ,, 46 ft.	A	..	..	..	..	4	..	..	..	..	4
,, ,, 44 ft.	A	..	..	78	..	101	8	3	2	3	195
,, ,, 43 ft.	A	..	..	16	..	..	..	..	..	..	16
,, ,, 42½ ft.	A	..	..	1	..	14	..	..	..	..	15
,, ,, 39½ ft.	A	..	..	8	..	..	3	..	..	..	11
,, ,, 35 ft.	A	..	..	3	..	..	..	..	..	..	3
,, ,, 30 ft.	B	..	..	4	..	12	..	..	..	1	17
,, 6-wheel	C	3	2	..	5	13	2	..	4	..	29
,, 4-wheel	D	4	..	..	..	6	..	..	..	2	12
Postal, bogie, 50 ft.	A	..	..	8	..	2	..	..	..	..	10
,, ,, 44 ft.	A	..	..	..	..	4	..	..	..	..	4
,, ,, 39½ ft.	A	..	..	2	..	..	..	..	..	..	2
,, ,, 30 ft.	B	..	..	..	..	1	..	..	..	..	1
,, ,, composite, 44 ft.	A	..	..	4	..	..	..	..	..	..	4
Totals..	..	19	4	656	10	524	36	8	12	13	1,282
WAGONS, ETC.											
Brake-vans, 4-wheel	F	6	2	15	2	54	7	2	4	3	95
,, bogie	F	2	..	163	2	96	9	5	2	2	281
,, Fell	F	..	..	7	..	..	2	..	..	..	9
Horseboxes	G	2	..	108	1	81	6	..	1	4	203
Cattle	H	4	..	201	4	171	14	4	3	2	403
Sheep ..	J	2	..	714	20	546	7	..	5	24	1,318
Covered goods ..	K	9	1	206	..	324	24	5	6	3	578
Sleeping-vans ..	K	..	..	31	..	42	3	1	1	..	78
High sides	L	39	4	4,220	31	4,308	208	17	93	144	9,064
,,	LA	..	..	250	..	1,326	..	..	..	..	1,576
Wharf	LB	..	..	..	..	..	45	..	..	..	45
Low sides	M	22	12	352	35	791	50	24	14	21	1,321
,, steel..	MA	..	..	160	..	..	..	..	..	..	160
Work-train	MB	..	..	70	..	75	..	..	..	..	145
Timber	N	82	40	121	..	165	36	32	8	..	484
Iron hopper	O	..	..	50	..	..	..	89	..	..	139
Platform coal ..	P	139	..	29	..	..	..	..	..	..	168
Movable hopper	Q	..	..	..	..	..	495	584	..	..	1,079
Frozen meat	W	..	..	120	..	65	..	..	15	..	200
Cool, insulated	X	2	..	175	..	11	..	..	..	..	188
,, ventilated	XA	1	1	109	..	109	..	..	..	7	227
Work-train hopper	Y	..	..	17	..	25	..	..	..	..	42
,,	YB	..	..	154	..	95	20	..	..	..	269
High side, bogie	R	..	2	202	..	51	9	..	..	..	264
,, ,,	RB	..	..	70	..	21	..	..	..	..	91
,, ,,	RD	..	..	64	..	..	..	..	..	..	64
,, ,,	RN	..	..	40	..	..	..	..	..	..	40
Carried forward ..	..	310	62	7,648	95	8,356	935	763	152	210	18,531

RETURN No. 13—*continued.*

STATEMENT OF CARRIAGE AND WAGON STOCK, ETC.—*continued.*

Description.	Class.	Whangarei.	Kaihu.	North Island Main Line and Branches.	Gisborne.	South Island Main Line and Branches.	Westland.	Westport.	Nelson.	Picton.	Total.
WAGONS, ETC.—*continued.*											
Brought forward	..	310	62	7,648	95	8,356	935	763	152	210	18,531
Sheep, bogie	S	..	..	73	..	52	..	..	..	..	125
Cattle, ,, ...	T	..	..	49	..	21	..	..	..	..	70
Platform, ,, ...	U	3	..	205	10	60	28	2	2	6	316
Gas-storeholders, bogie	UA	..	..	7	..	7	..	..	..	..	14
Platform, ,, ...	UB	..	..	127	..	51	44	..	..	..	222
Horseboxes, ,, ...	UG	..	..	18	..	14	..	..	..	..	32
Frozen meat, ,, ...	V	..	..	46	..	75	..	..	..	..	121
,, ,, ...	VB	..	..	20	..	..	..	..	..	..	20
Covered goods, ,, ...	Z	..	..	43	..	21	..	..	..	..	64
Totals..	..	313	62	8,236	105	8,657	1,007	765	154	216	19,515
TARPAULINS	..	80	24	6,315	90	8,026	275	42	130	240	15,222

RETURN No. 14.

STATEMENT OF LOCOMOTIVE STOCK FOR THE YEAR ENDING 31ST MARCH, 1913.

Class.	Type.	Cylinder.		Coupled Wheels.		Truck Wheels.		Whangarei.	Kaihu.	North Island Main Line and Branches.	Gisborne.	South Island Main Line and Branches.	Westland.	Westport.	Nelson.	Picton.	Total.
		Diameter.	Stroke.	No.	Diameter.	No.	Diameter.										
		in.	in.		Ft. in.		in.										
A	Tender (4-cyl. balanced compound)	12 & 19	22	6	4 6	6	30½	..	..	20	..	7	..	..	..	..	27
A	Tender (simple) ..	17	26	6	4 6	6	30½	..	..	..	..	1	..	..	..	..	1
AD	Tender (4-cyl. balanced compound)	12 & 19	22	6	4 6	6	30½	..	..	17	..	..	..	..	..	..	17
B	Tender	16	22	8	3 6½	4	30½	..	..	..	..	8	..	..	..	..	8
BA	,, ...	16	22	8	3 6½	4	26½	..	..	..	..	9	..	..	..	..	9
BC	,, (compound) ..	11½ & 19	20	8	3 7	2 2	28 30	..	..	1	..	..	..	..	..	..	1
C	Tank	9½	18	4	2 6¼	2	18	1	..	3	..	..	..	2	..	..	6
D	,, ...	9½	18	4	3 0½	2	18	1	..	10	..	15	1	..	1	1	29
E	,, (articulated compound)	9½ & 16	18	12	3 0½	2	26½	..	..	1	..	..	..	..	..	..	1
F	,, ...	10½	18	6	3 0½	..	..	..	2	24	..	37	5	2	1	..	71
FA	,, ...	12	18	6	3 0½	2	24	2	..	5	1	4	1	2	3	2	20
G	,, ...	10½	18	4	3 0½	4	21	..	..	..	..	..	..	..	..	4	4
H	,, (Fell) ..	14	16	4	2 8	2	30	..	..	6	..	..	..	..	..	..	6
J	Tender	14	20	6	3 6½	2	24⅜	..	..	17	..	15	..	..	..	..	32
K	,, ...	12	20	4	4 1⅛	4	30¼	..	..	2	..	6	..	..	..	..	8
L	Tank	12	18	4	3 6½	6	26½	..	..	9	..	1	..	..	..	..	10
LA	,, ...	12	18	4	3 9	4	26½	..	..	..	..	..	5	..	..	..	5
M	,, ...	13	20	4	3 6¼	6	28½	..	..	4	..	..	..	..	..	..	4
N	Tender	15	20	6	4 1⅛	4	28½	..	..	10	..	..	..	..	..	..	10
N	,, ...	15	20	6	4 1	4	30	..	..	2	..	..	..	..	..	..	2
NA	,, (compound) ..	10 & 17	20	6	4 1	4	30	..	..	2	..	..	..	..	..	..	2
NC	,, ,, ..	10 & 17	20	6	4 1	4	30	..	..	2	..	..	..	..	..	..	2
O	,, ...	15	18	8	3 0¼	2	28½	..	..	6	..	..	..	..	..	..	6
OA	,, (compound) ..	11 & 18	20	8	3 7	2	30	..	..	1	..	..	..	..	..	..	1
OB	,, ...	16	20	8	3 7	2	30	..	..	2	..	..	..	..	..	..	2
OC	,, (compound) ..	11 & 18	20	8	3 7	2	30	..	..	1	..	..	..	..	..	..	1
P	,, ...	15	20	8	3 5	2	26½	..	..	4	..	6	..	..	..	..	10
Q	,, ...	16	22	6	4 1⅛	2 4	30 26¼	..	..	6	..	7	..	..	..	..	13
R	Single Fairlie ..	12¼	16	6	3 0½	4	36½	..	..	10	..	8	..	..	..	..	18
S	,, ..	13	16	6	3 0½	4	36½	..	..	4	..	..	..	..	..	..	4
T	Tender	15	18	8	3 0¼	2	24⅜	..	..	2	..	4	..	..	..	..	6
U	,, ...	16	20	6	4 6	4	30½	..	..	..	..	9	..	..	..	..	9
UA	,, ...	16	20	6	4 1⅛	4	30	..	..	..	..	6	..	..	..	..	6
UB	,, ...	16	20	6	4 1⅛	4	26¼	..	..	..	..	20	..	..	..	..	20
UB	,, ...	16	22	6	4 1⅛	4	30	..	..	..	..	2	..	..	..	..	2
UC	,, ...	16	22	6	4 1⅛	4	30	..	..	..	..	10	..	..	..	..	10
UD	,, ...	16½	22	6	4 10	4	28	..	..	2	..	..	..	..	..	..	2
V	,, ...	15	20	6	4 1⅛	4	26½	..	..	3	..	10	..	..	..	..	13
W	Tank	14	20	6	3 0½	4	26½	..	..	..	..	..	2	..	..	..	2
WA	,, ...	14	20	6	3 3¾	4	28½	..	..	5	3	..	3	..	..	..	11
WB	,, ...	14	20	6	3 3¾	4	25	3	..	3	..	..	1	5	..	..	12
WD	,, ...	14	20	6	3 3¾	6	25	..	..	14	..	4	..	..	..	..	18
WE	,, ...	16	22	6	3 6½	8	30½	..	..	1	..	..	1	..	..	..	2
WF	,, ...	14	22	6	3 9	6	30½	..	..	22	..	16	..	..	..	..	38
WG	,, ...	14	22	6	3 9	8	26½	..	..	20	..	..	..	..	..	..	20
WH	,, ...	12	18	6	3 1	4	24½	..	..	3	..	..	..	..	..	..	3
WJ	,, ...	17	20	8	3 7	2 4	30 26	..	..	1	..	..	..	..	..	..	1
X	Tender (4-cyl. balanced compound)	13½ & 22	22	8	3 9	2 4	30½ 26½	..	..	8	..	..	..	..	..	..	8
	Totals ..	..	..	..	..	..	..	7	2	253	4	205	19	11	5	7	513

nies (taken from latest Official Records) :—

Earnings per Average Mile open.	Working-expenses per Average Mile open.	Net Earnings per Average Mile.	Expenses.				Number of Locomotives.	Number of Passenger-carriages.	Number of Wagons and Brake-vans.	Year ending
			Maintenance per Mile of Railway.	Locomotive, Car, and Wagon per Train-mile.	Traffic per Cent. of Revenue.	General Charges (including Compensation, &c.) per Cent. of Revenue.				
£	£	£	£	d.						
1,473	934	539	252	24·12	17·26	2·41	623	1,352	14,926	1912. 30 June.
1,708	1,097	611	238	25·73	17·46	2·23	942	1,244	18,204	"
732	463	269	136	18·50	17·04	1·47	535	610	10,972	"
1,431	886	545	208	25·15	15·56	1·35	354	509	7,587	"
763	544	219	118	30·11	19·05	2·00	359	387	8,118	"
622	440	182	129	20·24	18·41	3·73	79	173	1,710	"
712	450	262	173	18·46	16·67	3·00	293	550	9,792	1899. 31 Mar.
774	501	273	188	21·32	16·17	2·93	304	577	10,295	1900. 31 Mar.
794	519	275	196	19·99	17·15	2·09	306	603	10,868	1901. 31 Mar.
842	562	280	196	21·35	17·78	3·03	362	701	12,444	1902. 31 Mar.
873	594	279	204	21·36	18·24	3·19	372	751	12,992	1903. 31 Mar.
943	622	321	213	22·21	17·22	3·14	377	809	13,433	1904. 31 Mar.
938	634	304	217	21·05	18·28	3·10	389	864	13,885	1905. 31 Mar.
980	676	304	229	21·99	18·86	3·01	395	906	14,127	1906. 31 Mar.
1,078	744	334	253	23·37	18·90	2·80	398	966	14,605	1907. 31 Mar.
1,114	786	328	258	24·96	19·40	2·76	410	1,002	15,475	1908. 31 Mar.
1,148	828	320	258	25·56	20·73	3·16	452	1,116	16,476	1909. 31 Mar.
1,203	803	400	230	25·35	18·96	2·96	465	1,140	17,220	1910. 31 Mar.
1,275	840	435	254	25·81	18·10	2·81	478	1,166	18,036	1911. 31 Mar.
1,314	881	433	263	27·30	18·27	2·76	493	1,212	18,521	1912. 31 Mar.
1,400	954	446	271	28·20	19·40	2 64	513	1,282	19,515	1913. 31 Mar.

RETURN No. 15.

COMPARATIVE STATEMENT of the MILEAGE OPENED, CAPITAL EXPENDED, EARNINGS, EXPENSES, &c., of RAILWAYS in the following Colonies (taken from latest Official Records):—

	Area in Square Miles.	Population.	Average Miles open.	Gauge.		Total Cost.	Cost per Mile.	Population per Mile of Railway.	Cost per Head of Population.			Train-miles run.	Gross Earnings.	Earnings per Train-mile.	Working-expenses.	Working-expenses per Train-mile.	Profit on Working.	Net Earnings per Train-mile.	Percentage of Net Earnings to Capital.	Percentage of Working-expenses to Earnings.	Earnings per Head of Population.			Passengers carried.*	Tonnage of Goods.	Earnings per Average Mile open.	Working-expenses per Average Mile open.	Net Earnings per Average Mile.	Expenses. Maintenance per Mile of Railway.	Expenses. Locomotive, Car, and Wagon per Train-mile.	Expenses. Traffic per Cent. of Revenue.	Expenses. General Charges (including Compensation, &c.) per Cent. of Revenue.	Number of Locomotives.	Number of Passenger-carriages.	Number of Wagons and Brake-vans.	Year ending
				Ft.	in.	£	£		£	s.	d.		£	d.	£	d.	£	d.			£	s.	d.			£	£	£	£	d.						
Victoria ..	87,884	1,380,561	3,543	5	3	45,836,573	12,655	390	33	4	0	13,836,375	5,218,967	90·53	3,310,484	57·42	1,908,483	33·11	4·16	63·43	3	15	7	104,234,732	5,297,685	1,473	934	539	252	24·12	17·26	2·41	623	1,352	14,926	1912. 30 June.
New South Wales	310,700	1,777,534	3,799	4	8½	53,514,903	13,967	468	30	2	2	18,521,320	6,491,473	84·12	4,169,591	54·03	2,321,882	30·09	4·41	64·23	3	13	0	70,706,728	10,910,553	1,708	1,097	611	238	25·73	17·46	2·23	942	1,244	18,204	″
Queensland ..	668,224	622,129	4,143	3	6	27,751,227	6,505	146	44	12	2	10,327,237	3,032,858	70·50	1,917,266	44·50	1,115,592	26·00	4·02	63·22	4	17	6	17,080,756	3,214,006	732	463	269	136	18·50	17·04	1·47	535	610	10,972	″
South Australia .	903,690	424,000	1,460	3 5	6 3	13,240,175	9,066	290	31	4	6	6,029,151	2,090,563	83·22	1,293,987	51·50	796,576	31·72	6·02	61·89	4	18	7	18,353,054	2,781,720	1,431	886	545	208	25·15	15·56	1·35	354	509	7,587	
Western Australia	975,876	294,412	2,471	3	6	13,233,093	5,355	119	44	18	11	5,227,311	1,884,604	86·53	1,343,977	61·71	540,627	24·82	4·09	71·31	6	8	0	16,390,261	2,853,636	763	544	219	118	30·11	19·05	2·00	359	387	8,118	″
Tasmania ..	26,215	197,205	495	3 5	6 6	4,253,013	8,583	398	21	11	4	1,046,479	312,786	71·73	221,172	50·72	91,614	21·01	2·15	70·71	1	11	9	1,715,464	452,098	622	440	182	129	20·24	18·41	3·73	79	173	1,710	″
New Zealand ..	104,471	746,673	2,090	3	6	16,404,076	7,849	357	21	19	5	3,968,708	1,469,665	89·00	929,737	56·22	539,928	32·78	3·29	63·26	1	19	4	4,955,553	2,624,059	712	450	262	173	18·46	16·67	3·00	293	550	9,792	1899. 31 Mar.
.	104,471	758,616	2,099	3	6	16,703,887	7,958	361	22	0	5	4,187,893	1,623,891	93·00	1,052,358	60·31	571,533	32·69	3·42	64·80	2	2	10	5,468,284	3,127,824	774	501	273	188	21·32	16·17	2·93	304	577	10,295	1900. 31 Mar.
..	104,471	815,349	2,174	3	6	17,207,328	7,915	375	21	2	1	4,620,971	1,727,236	89·75	1,127,848	58·58	599,388	31·17	3·47	65·30	2	2	4	6,243,593	3,339,687	794	519	275	196	19·99	17·15	2·09	306	603	10,868	1901. 31 Mar.
.	104,471	833,137	2,227	3	6	18,170,722	8,159	374	21	16	2	5,066,360	1,874,586	88·75	1,252,237	59·32	622,349	29·43	3·43	66·80	2	5	0	7,356,136	3,529,177	842	562	280	196	21·35	17·78	3·03	362	701	12,444	1902. 31 Mar.
.	104,471	857,985	2,262	3	6	19,081,735	8,436	379	22	4	10	5,443,333	1,974,038	87·00	1,343,415	59·23	630,623	27·77	3·30	68·05	2	6	0	7,575,390	3,730,394	873	594	279	204	21·36	18·24	3·19	372	751	12,992	1903. 31 Mar.
	104,471	882,097	2,305	3	6	20,692,911	8,977	383	23	9	2	5,685,399	2,180,641	91·75	1,438,724	60·48	741,917	31·27	3·58	65·98	2	9	5	8,306,383	4,072,576	943	622	321	213	22·21	17·22	3·14	377	809	13,433	1904. 31 Mar.
	104,471	908,114	2,347	3	6	21,701,572	9,141	387	23	17	11	6,107,079	2,209,231	86·50	1,492,900	58·46	716,331	28·04	3·30	67·58	2	8	8	8,514,112	4,011,511	938	634	304	217	21·05	18·28	3·10	389	864	13,885	1905. 31 Mar.
″ ..	104,471	933,111	2,391	3	6	22,498,972	9,410	391	24	2	3	6,413,573	2,349,704	87·75	1,621,239	60·47	728,465	27·28	3·24	69·00	2	10	4	8,826,382	4,241,422	980	676	304	229	21·99	18·86	3·01	395	906	14,127	1906. 31 Mar.
″ ..	104,471	961,604	2,427	3	6	23,504,272	9,570	396	24	8	10	6,755,454	2,624,600	93·00	1,812,482	64·21	812,118	28·79	3·45	69·06	2	14	7	9,600,786	4,592,099	1,078	744	334	253	23·37	18·90	2·80	398	966	14,605	1907. 31 Mar.
″ ..	104,471	985,318	2,469	3	6	24,365,647	9,861	399	24	14	7	7,051,274	2,761,938	93·75	1,949,759	66·18	812,179	27·57	3·33	70·59	2	16	1	9,756,716	4,834,534	1,114	786	328	258	24·96	19·40	2·76	410	1,002	15,475	1908. 31 Mar.
	104,471	1,016,044	2,556	3	6	27,762,592	10,351	398	27	6	6	7,458,236	2,929,526	94·00	2,114,815	67·89	814,711	26·11	3·13	72·19	2	17	8	10,457,144	4,871,874	1,148	828	320	258	25·56	20·73	3·16	452	1,116	16,476	1909. 31 Mar.
	104,471	1,035,211	2,704	3	6	28,513,476	10,494	383	27	10	10	7,889,166	3,249,790	98·75	2,169,474	65·84	1,080,316	32·91	3·80	66·76	3	2	9	11,141,142	5,223,414	1,203	803	400	230	25·35	18·96	2·96	465	1,140	17,220	1910. 31 Mar.
″ .	104,471	1,055,640	2,742	3	6	29,606,546	10,723	385	28	1	0	8,141,075	3,494,182	102·75	2,303,272	67·75	1,190,910	35·00	4·06	65·92	3	6	2	11,200,613	5,555,292	1,275	840	435	254	25·81	18·10	2·81	478	1,166	18,036	1911. 31 Mar.
″ ..	104,471	1,081,344	2,801	3	6	30,506,089	10,864	386	28	4	2	8,371,687	3,676,509	105·25	2,465,896	70·52	1,210,613	34·73	3·98	67·07	3	8	0	11,891,134	5,599,756	1,314	881	433	263	27·30	18·27	2·76	493	1,212	18,521	1912. 31 Mar.
″	104,471	1,111,592	2,840	3	6	31,611,220	11,053	391	28	8	9	9,016,224	3,971,002	105·50	2,705,609	71·84	1,265,393	33·66	4·04	68·13	3	11	5	13,123,879	5,957,005	1,400	954	446	271	28·20	19·40	2·64	513	1,282	19,515	1913. 31 Mar.

The figures for passenger traffic in New Zealand are exclusive of season tickets.

RETURN No. 16.

RETURN showing the MILEAGE, CAPITAL COST, TRAFFIC, REVENUE, and EXPENDITURE of the New Zealand Government Railways from 1883 to 31st March, 1913.

MILEAGE, CAPITAL COST, TRAFFIC, AND REVENUE.

Year.	Miles.	Capital Cost.	Train-mileage.	Passengers.		Season Tickets.		Coaching.					Drays.	Cattle.	Sheep.	Pigs.	Lime, Chaff.	Wool	Firewood.	Timber.	Grain.	Merchandise	Minerals.	Total.	Goods Revenue.	Miscellaneous Revenue.	Rents and Commission.	Total Revenue.	Revenue per Train-mile.
				No.	Revenue	No.	Revenue.	Parcels.	Horses.	Carriages.	Dogs.	Revenue.																	
		£			£		£	No.	No.	No.	No.	£	No.	No.	No.	No.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	£	£	£	£	d.
1882-83 ..	1,358	10,478,998	2,785,685	3,283,378	362,106	8,621	..	308,620	9,850	975	22,716	34,658	928	27,605	421,671	27,799	11,810	51,703	75,740	197,231	367,428	350,823	510,088	1,564,823	518,330	29,496	8,757	953,347	82·00
1883-84 ..	1,396	11,078,500	2,841,745	3,272,644	321,615	9,036	14,763	325,675	9,555	906	24,666	35,148	939	29,675	627,090	29,522	16,470	62,067	81,255	183,449	432,223	350,263	574,313	1,700,040	548,918	31,644	9,221	961,304	81·00
1884-85 ..	1,477	11,810,194	2,882,422	3,232,886	348,628	8,999	16,406	313,047	10,358	793	24,020	35,592	756	32,738	666,522	30,268	17,030	68,523	86,670	178,909	414,590	365,623	618,511	1,749,856	611,504	23,160	10,422	1,045,712	87·00
1885-86 ..	1,613	12,472,814	3,020,550	3,362,266	346,895	10,717	16,482	317,242	9,518	653	22,668	33,271	660	36,634	781,470	40,558	14,985	74,778	80,280	202,571	413,847	368,225	669,081	1,823,767	622,810	16,732	11,229	1,047,419	83·00
1886-87 ..	1,727	13,017,567	3,008,949	3,426,403	339,255	11,821	16,998	341,634	9,165	689	21,598	33,749	597	37,435	856,431	48,151	22,110	82,963	73,040	175,581	345,254	329,227	719,579	1,747,754	581,350	14,893	12,523	998,768	79·50
1887-88 ..	1,758	13,352,978	2,944,786	3,451,850	334,926	11,518	17,800	368,680	9,301	619	21,128	34,727	592	32,766	857,397	50,046	22,190	84,147	65,860	158,024	358,022	347,379	700,140	1,735,762	579,359	14,611	13,420	994,843	81·00
1888-89 ..	1,777	13,472,837	2,796,007	3,132,803	305,632	11,817	17,816	370,707	8,378	650	19,971	34,101	547	29,426	842,840	47,126	24,335	78,203	67,045	160,399	447,027	356,732	786,690	1,920,431	610,488	15,663	13,915	997,615	85·50
1889-90 ..	1,809	13,899,955	2,868,203	3,376,459	347,844	12,311	21,504	375,271	9,358	708	21,209	37,097	678	31,700	985,336	51,539	37,900	91,214	77,454	172,814	498,198	399,258	737,117	2,073,955	655,007	18,091	16,027	1,095,570	91·50
1890-91 ..	1,842	14,278,586	2,894,776	3,433,629	333,122	13,881	20,471	380,319	9,790	757	22,965	38,997	582	35,209	1,258,471	54,684	29,800	87,701	73,650	153,078	528,683	385,020	828,079	2,086,011	690,779	20,718	17,615	1,121,701	93·00
1891-92 ..	1,869	14,656,691	3,010,489	3,555,764	342,563	16,341	22,054	393,407	11,370	819	25,439	41,795	653	36,248	1,067,614	49,639	26,605	85,888	87,834	170,520	442,277	379,768	873,899	2,066,791	671,469	19,388	18,163	1,115,432	88·75
1892-93 ..	1,886	14,733,120	3,002,174	3,759,044	367,594	16,504	23,025	420,610	12,993	921	26,780	44,801	796	33,597	1,321,046	38,814	34,314	96,841	88,186	168,910	523,637	397,411	884,031	2,193,330	707,786	18,830	19,486	1,181,522	94·50
1893-94 ..	1,948	15,137,036	3,113,231	3,972,701	378,480	17,226	23,540	448,770	12,350	793	25,667	45,206	831	39,223	1,356,434	38,022	38,610	101,340	84,658	183,192	411,191	377,116	864,538	2,060,645	686,469	18,563	20,535	1,172,793	90·25
1894-95 ..	1,993	15,352,613	3,221,620	3,905,578	360,243	28,623	24,906	444,981	11,185	750	23,517	43,270	705	40,890	1,519,921	43,292	36,972	103,328	85,102	198,578	388,556	377,938	857,917	2,048,391	683,726	17,265	21,441	1,150,851	85·75
1895-96 ..	2,014	15,425,532	3,307,226	4,162,426	359,822	36,233	29,412	455,511	11,115	716	22,551	54,736	693	39,651	1,839,712	53,346	53,260	99,363	78,804	213,132	374,699	389,851	878,659	2,087,798	698,115	18,466	22,490	1,183,041	85·75
1896-97 ..	2,018	15,577,392	3,409,218	4,439,387	378,684	43,069	31,476	489,825	11,347	778	22,891	58,084	841	35,909	1,964,110	52,327	60,542	98,958	80,014	257,825	423,888	415,448	1,032,252	2,368,927	774,163	20,225	23,526	1,286,158	90·50
1897-98 ..	2,055	15,993,903	3,666,483	4,672,264	399,262	48,660	34,168	530,993	9,936	862	23,069	60,872	926	44,935	2,356,595	42,784	77,226	103,055	83,656	313,073	427,448	465,041	1,048,868	2,518,367	837,590	19,631	24,485	1,376,008	90·00
1898-99 ..	2,090	16,404,076	3,968,708	4,955,553	438,367	55,027	37,186	589,372	10,348	998	24,963	66,418	1106	55,878	2,518,233	34,512	83,084	97,396	87,038	310,266	420,071	478,851	1,147,353	2,624,059	882,077	20,328	25,289	1,469,665	89·00
1899-1900..	2,104	16,703,887	4,187,893	5,468,284	474,793	63,335	40,228	624,115	11,474	1159	27,066	68,488	1345	65,063	2,523,787	36,049	77,292	104,621	92,126	334,677	764,033	536,428	1,218,698	3,127,874	985,723	25,135	29,524	1,623,891	93·00
1900-1901..	2,212	17,207,328	4,620,971	6,243,593	503,051	82,921	41,925	633,770	11,421	1336	30,658	72,712	1566	72,868	2,412,191	51,059	78,844	96,519	92,830	380,803	772,571	551,879	1,366,241	3,339,687	1,051,695	28,601	29,253	1,727,236	89·75
1901-1902..	2,235	18,170,722	5,066,360	7,356,136	575,697	100,778	45,322	677,804	11,926	1506	30,404	79,561	1564	83,458	2,724,860	55,159	86,378	101,878	100,236	427,153	813,345	556,395	1,443,792	3,529,177	1,110,575	30,303	33,129	1,874,586	88·75
1902-1903..	2,291	19,081,735	5,443,333	7,575,390	576,529	118,431	49,169	731,762	12,737	1646	34,202	87,273	1921	102,461	3,821,333	61,844	121,092	116,309	100,498	436,008	718,376	633,685	1,604,426	3,730,394	1,189,101	29,960	42,006	1,974,038	87·00
1903-1904..	2,328	20,692,911	5,685,399	8,306,383	652,080	129,919	52,580	798,800	14,629	2056	36,816	110,151	2340	107,435	3,756,378	70,268	132,562	101,316	106,066	509,712	820,453	658,144	1,744,323	4,072,576	1,293,169	33,074	39,587	2,180,641	91·75
1904-1905..	2,374	21,701,572	6,107,079	8,514,112	680,905	140,453	57,252	825,468	15,651	2228	38,592	115,051	2307	110,924	3,412,984	77,768	131,714	107,625	109,174	493,327	732,479	630,832	1,806,360	4,011,511	1,277,976	40,067	37,980	2,209,231	86·50
1905-1906..	2,406	22,498,972	6,413,573	8,826,382	723,867	147,989	63,006	892,037	17,008	2376	40,097	142,642	2350	119,311	3,348,685	92,702	144,884	116,086	106,510	534,533	772,258	628,603	1,938,548	4,241,422	1,346,038	38,518	35,633	2,349,704	87·75
1906-1907..	2,456	23,504,272	6,755,454	9,600,786	823,067	165,504	68,986	929,929	17,770	2440	42,081	151,913	2496	133,031	4,661,001	115,222	168,316	128,161	109,236	567,835	770,706	712,399	2,135,446	4,592,099	1,498,686	44,692	37,256	2,624,600	93·00
1907-1908..	2,471	24,365,647	7,051,274	9,756,716	835,473	185,174	77,505	937,565	18,423	2829	47,766	176,876	2530	150,751	4,593,100	125,987	169,767	120,593	110,154	616,892	739,568	757,647	2,319,913	4,834,534	1,582,328	50,143	39,613	2,761,938	93·75
1908-1909..	2,682	27,762,592	7,458,236	10,457,144	921,411	192,547	90,248	961,293	19,124	2550	50,798	187,040	2427	159,884	5,211,489	117,626	182,666	137,916	102,620	582,860	793,793	729,971	2,342,048	4,871,874	1,630,704	57,147	42,976	2,929,526	94·00
1909-1910..	2,717	28,513,476	7,889,166	11,141,142	1,070,791	199,371	100,249	1,047,806	20,571	2532	51,235	192,585	2490	176,412	5,126,762	126,930	179,902	151,051	98,360	523,845	1,044,468	739,667	2,486,121	5,223,414	1,772,546	57,132	56,487	3,249,790	98·75
1910-1911..	2,761	29,606,546	8,141,075	11,200,613	1,104,295	222,104	119,117	1,118,361	20,137	2751	52,762	193,789	2441	210,848	5,911,291	160,379	198,546	143,247	109,400	627,107	1,013,298	808,444	2,655,250	5,555,292	1,961,078	56,777	59,126	3,494,182	102·75
1911-1912..	2,808	30,506,089	8,371,687	11,891,134	1,185,825	236,957	133,289	1,190,907	20,510	2801	56,156	203,334	2904	207,546	5,454,443	147,268	191,794	141,607	110,436	718,414	949,556	811,166	2,676,783	5,599,756	2,032,785	57,754	63,522	3,676,509	105·25
1912-1913..	2,860	31,611,220	9,016,224	13,123,879	1,314,340	265,259	147,533	1 320,873	21,971	2904	57,388	215,209	3189	221,595	5,388,805	136,130	213,322	147,735	112,072	695,060	1,181,899	845,934	2,760,983	5,957,005	2,157,686	67,100	69,134	3,971,002	105·50

EXPENDITURE.

Year.	Expenditure per Train-mile.	Expenditure per Cent. of Revenue.	Maintenance of Way.				Locomotive Power.			Carriages and Wagons.			Traffic.			Head and Departmental Offices.			General Charges and Sundries.			Less Credit Recoveries.*			Total Expenditure.
			Amount.	Per Cent. of Revenue.	Per Mile of Railway.	Per Train-mile.	Amount.	Per Cent. of Revenue.	Per Train-mile.	Amount.	Per Cent. of Revenue.	Per Train-mile.	Amount.	Per Cent. of Revenue.	Per Train-mile.	Amount.	Per Cent. of Revenue.	Per Train-mile.	Amount.	Per Cent. of Revenue.	Per Train-mile.	Amount.	Per Cent. of Revenue.	Per Train-mile.	
	d.	£	£	£	£	d.	£	£	d.	£	£	d.	£	£	d.	£	£	d.	£	£	d.	£	£	d.	£
1882-83 ..	51·07	62·18	209,823	22·01	155·54	18·08	153,607	16·11	13·23	38,887	4·08	3·35	156,334	16·40	13·47	..	..	..	34,170	3·58	2·94	..	..	..	592,821
1883-84 ..	55·40	68·24	233,936	24·34	169·29	19·76	162,558	16·91	13·73	51,304	5·34	4·33	166,848	17·36	14·09	..	..	..	41,345	4·30	3·49	..	..	..	655,990
1884-85 ..	57·45	65·99	254,329	24·32	176·87	21·18	166,576	15·93	13·87	56,245	5·38	4·68	171,822	16·43	14·30	..	..	..	41,055	3·93	3·42	..	..	..	690,026
1885-86 ..	54·85	65·91	247,566	23·64	160·32	19·67	162,860	15·55	12·94	55,303	5·28	4·40	180,352	17·22	14·33	..	..	..	44,259	4 22	3·51	..	..	..	690,340
1886-87 ..	55·76	69·99	252,530	25·28	149·85	20·14	166,407	16 66	13·27	59,107	5·92	4·72	177,825	17·80	14·18	..	..	..	43,203	4·33	3·45	..	..	..	699,072
1887-88 ..	56·02	69·09	246,340	24·76	141 35	20·08	159,757	16·06	13·02	65,018	6·54	5·30	173,991	17·49	14·18	..	..	..	42,222	4·24	3·44	..	..	..	687,328
1888-89 ..	55·54	64·86	232,915	23·35	131·31	19·99	153,807	15·42	13·20	55,422	5·55	4·76	176,995	17·74	15·19	..	..	..	27,906	2·80	2·40	..	..	..	647,045
1889-90 ..	57·13	62·32	242,075	22·10	134·70	20·26	159,180	14 53	13·32	67,211	6·13	5·62	182,427	16·65	15·27	..	..	..	31,894	2·91	2·66	..	..	..	682,787
1890-91 ..	58·09	62·47	241,330	21·51	132·27	20·01	172,064	15·34	14 26	66,228	5·91	5·49	193,461	17·25	16·04	..	..	..	27,622	2·46	2·29	..	..	..	700,703
1891-92 ..	56·32	63·34	245,163	21·98	131·41	19·54	177,156	15·88	14·12	57,723	5·17	4·60	198,654	17·81	15·84	..	..	..	27,822	2·50	2·22	..	..	..	706,517
1892-93 ..	58·53	61·97	262,600	22·23	140·18	20·99	183,774	15·55	14·69	53,962	4·57	4·32	202,153	17·11	16·16	..	..	..	29,653	2·51	2·37	..	..	..	732,142
1893-94 ..	56·69	62·70	268,451	22·89	140·35	20·70	177,833	15·16	13·71	56,470	4·82	4·35	201,166	17·15	15·51	..	..	..	31,440	2·68	2·42	..	..	..	735,359
1894-95 ..	54·54	63·62	272,718	23·70	138·57	20·32	175,758	15 27	13·09	50,949	4·43	3·79	201,641	17·52	15·02	..	..	..	31,095	2 70	2 32	..	..	..	732,160
1895-96 ..	54·53	63·51	282,593	23·89	141·45	20·51	185,669	15·69	13·47	51,692	4·62	3 97	207,253	17·52	15·04	37,979	3·21	2·76	..	..	..	16,818	1·42	1·22	751,368
1896-97 ..	55·55	61·35	301,981	23·48	149·77	21·26	190,543	14·82	13·41	65,825	5·12	4 64	213,914	16·63	15·06	39,072	3·03	2·75	..	..	..	22,280	1·73	1·57	789,054
1897-98 ..	56·11	62·30	327,987	23·84	160·53	21·47	209,289	15·21	13·70	65,344	4·75	4·27	232,646	16·91	15 23	41,062	2·98	2·69	..	..	..	19,137	1·39	1·25	857,191
1898-99 ..	56·22	63·26	357,189	24 30	172·92	21·60	231,532	15·75	14·00	73,680	5·01	4·46	244,932	16·67	14·81	44,319	3·02	2·68	..	..	..	21,914	1·49	1·33	929,738
1899-1900 ..	60·31	64·80	394,619	24·30	187·99	22·61	295,542	18·20	16·93	76,555	4·71	4·39	262,552	16·17	15·05	47,717	2·93	2·74	..	..	..	24,627	1·51	1·41	1,052,358
1900-1901 ..	58·58	65·30	426,405	24·69	196·14	22·15	293,383	16·98	15·24	91,532	5·30	4·75	296,159	17·15	15 38	51,590	2·99	2·68	..	..	..	31,221	1·81	1·62	1,127,848
1901-1902 ..	59·32	66·80	436,847	23·30	196·17	20·69	351,172	18·73	16·64	99,522	5·31	4·71	333,211	17·78	15·79	56,756	3·03	2·69	..	..	..	25,271	1·35	1·20	1,252,237
1902-1903 ..	59·23	68·05	460,398	23·32	203·55	20·30	378,575	19·18	16·69	105,976	5·37	4·67	360,061	18·24	15·88	62,997	3·19	2·77	..	..	..	24,592	1·25	1·08	1,343,415
																			Lake Wakatipu Steamers						
1903-1904..	60·48	65·98	490,819	22·58	212·94	20·72	414,168	19·05	17·48	111,988	5·15	4·73	374,347	17·22	15·80	68,223	3·14	2·88	6,048	86·45	..	26,869	1·23	1·13	1,438,724
1904-1905..	58·46	67·58	508,735	23·09	216·64	19·99	425,717	19·32	16·73	109,918	4·99	4·32	402,715	18·28	15·83	68,353	3·10	2·68	5,198	88·14	..	27,736	1·26	1·09	1,492,900
1905-1906..	60·47	69·00	546,805	23·33	228·67	20·46	468,315	19·98	17·52	119,437	5·10	4·47	442,064	18·86	16·54	70,539	3·01	2·64	5,227	87·33	..	31,148	1·33	1·16	1,621,239
1906-1907..	64·21	69·06	613,890	23·45	252·78	21·81	522,100	19·94	18·55	135,793	5·19	4·82	494,942	18·90	17·58	73,376	2·80	2·61	5,082	82·52	..	32,701	1·25	1·16	1,812,482
1907-1908..	66·18	70·59	638,560	23·18	258·31	21·73	572,586	20·78	19·49	160,818	5·84	5·47	534·634	19·40	18·20	76,082	2·76	2·59	5,377	81·02	..	38,298	1·39	1·30	1,949,759
1908-1909..	67·89	72·19	656,154	22·45	257·63	21·11	628,410	21·50	20·22	165,850	5·67	5·34	605,940	20·73	19·50	92,445	3·16	2·98	5,058	78·56	..	39,042	1·33	1·26	2,114,815
1909-1910..	65·84	66·76	620,008	19·12	229·94	18·86	669,559	20·65	20·37	163,833	5·05	4·98	615,033	18·96	18·71	95,902	2·96	2·92	5,139	75·99	..	..	..	..	2,169,474
1910-1911..	67·75	65·92	693,445	19·89	253·58	20·44	695,062	19·93	20·50	180,221	5·17	5·31	631,380	18·10	18·61	98,135	2·81	2·89	5,029	75·70	..	..	..	..	2,303,272
1911-1912..	70·52	67·07	735,546	20·04	263·46	21·08	743,443	20·26	21·31	209·039	5·70	5·99	670,631	18·27	19·22	101,240	2·76	2·92	5,997	89·92	..	..	..	..	2,465,896
1912-1913..	71·84	68·13	765,860	19·32	270·61	20·38	833,146	21·02	22·18	226,146	5·71	6·02	768,936	19·40	20·47	104,902	2·64	2·79	6,619	94·27	..		..	..	2,705,609

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* For the years 1909-1910 and 1910-1911, recoveries have been credited to the branch to which they relate

rnment Railways from 1883 to 31st March, 1913.

	Firewood.	Timber.	Grain.	Merchandise.	Minerals.	Total.	Goods Revenue.	Miscellaneous Revenue.	Rents and Commission.	Total Revenue.	Revenue per Train-mile.
	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	£	£	£	£	d.
	75,740	197,231	367,428	350,823	510,088	1,564,823	518,330	29,496	8,757	953,347	82·00
18	81,255	183,449	432,223	350,263	574,313	1,700,040	548,918	31,644	9,221	961,304	81·00
18	86,670	178,909	414,590	365,623	618,511	1,749,856	611,504	23,160	10,422	1,045,712	87·00
18	80,280	202,571	413,847	368,225	669,081	1,823,767	622,810	16,732	11,229	1,047,419	83·00
18	73,040	175,581	345,254	329,227	719,579	1,747,754	581,350	14,893	12,523	998,768	79·50
18	65,860	158,024	358,022	347,379	700,140	1,735,762	579,359	14,611	13,420	994,843	81·00
18	67,045	160,399	447,027	356,732	786,690	1,920,431	610,488	15,663	13,915	997,615	85·50
18	77,454	172,814	498,198	399,258	797,117	2,073,955	655,007	18,091	16,027	1,095,570	91·50
18	73,650	153,078	528,683	385,020	828,079	2,086,011	690,779	20,718	17,615	1,121,701	93·00
18	87,834	170,520	442,277	379,768	873,899	2,066,791	671,469	19,388	18,163	1,115,432	88·75
18	88,186	168,910	523,637	397,411	884,031	2,193,330	707,786	18,830	19,486	1,181,522	94·50
18	84,658	183,192	411,191	377,116	864,538	2,060,645	686,469	18,563	20,535	1,172,793	90·25
18	85,102	198,578	388,556	377,938	857,917	2,048,391	683,726	17,265	21,441	1,150,851	85·75
18	78,804	213,132	374,699	389,881	878,659	2,087,798	698,115	18,466	22,490	1,183,041	85·75
18	80,014	257,825	423,888	415,448	1,032,252	2,368,927	774,163	20,225	23,526	1,286,158	90·50
18	83,656	313,073	427,448	465,041	1,048,868	2,518,367	837,590	19,631	24,485	1,376,008	90·00
18	87,038	310,266	420,071	478,851	1,147,353	2,624,059	882,077	20,328	25,289	1,469,665	89·00
18	92,126	334,677	764,033	536,428	1,218,698	3,127,874	985,723	25,135	29,524	1,623,891	93·00
18	92,830	380,803	772,571	551,879	1,366,241	3,339,687	1,051,695	28,601	29,253	1,727,236	89·75
19	100,236	427,153	813,345	556,395	1,443,792	3,529,177	1,110,575	30,303	33,129	1,874,586	88·75
19	100,498	436,008	718,376	633,685	1,604,426	3,730,394	1,189,101	29,960	42,006	1,974,038	87·00
19	106,066	509,712	820,453	658,144	1,744,323	4,072,576	1,293,169	33,074	39,587	2,180,641	91·75
19	109,174	493,327	732,479	630,832	1,806,360	4,011,511	1,277,976	40,067	37,980	2,209,231	86·50
19	106.510	534,533	772,258	628,603	1,938,548	4,241,422	1,346,038	38,518	35,633	2,349,704	87·75
1	109,236	567,835	770,706	712,399	2,135,446	4,592,099	1,498,686	44,692	37,256	2,624,600	93·00
1	110,154	616,892	739,568	757,647	2,319,913	4,834,534	1,582,328	50,143	39,613	2,761,938	93·75
1	102,620	582,860	793,793	729,971	2,342,048	4,871,874	1,630,704	57,147	42,976	2,929,526	94·00
1	98,360	523,845	1,044,468	739,667	2,486,121	5,223,414	1,772,546	57,132	56,487	3,249,790	98·75
1	109,400	627,107	1,013,298	808,444	2,655,250	5,555,292	1,961,078	56,777	59,126	3,494,182	102·75
1	110,436	718,414	949,556	811,166	2,676,783	5,599,756	2,032,785	57,754	63,522	3,676,509	105·25
1	112,072	695,060	1,181,899	845,934	2,760,983	5,957,005	2,157,686	67,100	69,134	3,971,002	105·50
1											

Head and Departmental Offices.			General Charges and Sundries.			Less Credit Recoveries.*			Total Expenditure.
Amount.	Per Cent. of Revenue.	Per Train-mile.	Amount.	Per Cent. of Revenue.	Per Train-mile.	Amount.	Per Cent. of Revenue.	Per Train-mile.	
£	£	d.	£	£	d.	£	£	d.	£
..	..	..	34,170	3·58	2·94	..	..	..	592,821
..	..	..	41,345	4·30	3·49	..	..	..	655,990
..	..	..	41,055	3·93	3·42	..	..	..	690,026
..	..	..	44,259	4·22	3·51	..	..	..	690,340
..	..	..	43,203	4·33	3·45	..	..	..	699,072
..	..	..	42,222	4·24	3·44	..	..	..	687,328
..	..	..	27,906	2·80	2·40	..	..	..	647,045
..	..	..	31,894	2·91	2·66	..	..	..	682,787
..	..	..	27,622	2·46	2·29	..	..	..	700,703
.	..	..	27,822	2·50	2·22	..	..	..	706,517
..	..	..	29,653	2·51	2·37	..	..	..	732,142
..	..	..	31,440	2·68	2·42	..	..	..	735,359
..	..	..	31,095	2·70	2·32	..	..	..	732,160
37,979	3·21	2·76	..	..	..	16,818	1·42	1·22	751,368
39,072	3·03	2·75	..	..	..	22,280	1·73	1·57	789,054
41,062	2·98	2·69	..	..	..	19,137	1·39	1·25	857,191
44,319	3·02	2·68	..	..	..	21,914	1·49	1·33	929,738
47,717	2·93	2·74	..	..	..	24,627	1·51	1·41	1,052,358
51,590	2·99	2·68	..	..	..	31,221	1·81	1·62	1,127,848
56,756	3·03	2·69	..	..	..	25,271	1·35	1·20	1,252,237
62,997	3·19	2·77	..	..	..	24,592	1·25	1·08	1,343,415
			Lake Wakatipu Steamers.						
68,223	3·14	2·88	6,048	86·45	..	26,869	1·23	1·13	1,438,724
68,353	3·10	2·68	5,198	88·14	..	27,736	1·26	1·09	1,492,900
70,539	3·01	2·64	5,227	87·33	..	31,148	1·33	1·16	1,621,239
73,376	2·80	2·61	5,082	82·52	..	32,701	1·25	1·16	1,812,482
76,082	2·76	2·59	5,377	81·02	..	38,298	1·39	1·30	1,949,759
92,445	3·16	2·98	5,058	78·56	..	39,042	1·33	1·26	2,114,815
95,902	2·96	2·92	5,139	75·99	..	..	..	..	2,169,474
98,135	2·81	2·89	5,029	75·70	..	..	..	..	2,303,272
101,240	2·76	2·92	5,997	89·92	..	..	..	..	2,465,896
104,902	2·64	2·79	6,619	94·27	..	..	..	..	2,705,609

h they relate.

RETURN No. 17.

Statement of Stores Contracts, &c., current during the Year ending 31st March, 1913.

Service.	Period.	Name of Contractor.	Rate.
Auckland—			
General stores	31/3/1914	Briscoe and Co. (Limited)	As per tender.
,,	,,	John Burns and Co. (Limited)	,,
,,	,,	A. and T. Burt (Limited)	,,
,,	,,	Ross and Glendining (Limited)	,,
,,	,,	Sargood, Son, and Ewen (Limited)	,,
,,	,,	Hardley and Hardley (Limited)	,,
,,	,,	Kempthorne, Prosser, and Co. (Limited)	,,
Benzine and benzoline	,,	Vacuum Oil Company (Limited)	1/1½ and 1/6 per gal.
Bricks, red, ordinary	,,	J. J. Craig (Limited)	46/6 per 1,000.
,, hand-pressed	,,	,, ,,	90/ ,,
Cement, New Zealand Portland	,,	New Zealand Portland Cement Company	3/2 per cwt.
,, smooth-on	,,	S. D. Hanna and Son	1/9 per lb.
Coal-scuttles	,,	Southern Cross Galvanized-iron Manufacturing Company (Limited)	3/ and 3/3 each.
Drainpipes, stoneware	,,	J. J. Craig (Limited)	As per tender.
Firebricks and fireclay, New Zealand	,,	,, ,,	,,
Gasolene	,,	Vacuum Oil Company (Limited)	2/2 per gal.
Gum, core	,,	Castendyk and Focke	27/6 per cwt.
Heaters, kerosene, 100 c.p. and 200 c.p.	,,	Vacuum Oil Company (Limited)	15/ and 20/ each.
Hose-pipe, chrome-leather	,,	S. D. Hanna and Son	As per tender.
Hoses, indiarubber, delivery and suction	,,	Perdrian Rubber Company (Limited)	,,
Indiarubber sheet, Reddaway's	,,	A. R. Hislop	4/6 per lb.
,, cloth-insertion	,,	Perdrian Rubber Company (Limited)	1/6 ,,
Iron and steel	,,	Briscoe and Co. (Limited)	As per tender.
Leather, green buffalo	,,	McKerrow and Co.	1/2 and 1/4 per sq. ft.
,, cowhide, &c.	,,	Brace, Windle, Blythe, and Co. (Limited)	As per tender.
Lime, ordinary and hydraulic	,,	J. J. Craig (Limited)	1/3 and 1/4 per bush.
Oil, kerosene, 150° test	,,	Vacuum Oil Company (Limited)	10d. per gal.
Oil-feeders, Kaye's patent	,,	R. Wood	As per tender.
Packing, Tuck's, and asbestos	,,	John Chambers and Son (Limited)	1/3 per lb.
,, Harris's	,,	,,	1/8 ,,
Rendrock and oil	,,	J. J. Craig (Limited)	9½d. ,,
Scrim, 72 in., No. 2	,,	Castendyk and Focke	4½d. per yard.
Soda, acetate of	,,	,,	26/6 per cwt.
Steel, cast, all shapes	,,	John Chambers and Son (Limited)	60/ ,,
Wellington—			
General stores	,,	Briscoe and Co. (Limited)	As per tender.
,,	,,	E. W. Mills and Co. (Limited)	,,
,,	,,	George Winder	,,
,,	,,	T. Ballinger and Co. (Limited)	,,
,,	,,	Ballinger Bros.	,,
,,	,,	Smith and Smith (Limited)	,,
,,	,,	Stewart Timber Company (Limited)	,,
,,	,,	Kirkcaldie and Stains (Limited)	,,
,,	,,	Kempthorne, Prosser, and Co. (Limited)	,,
,,	,,	H. G. Anderson and Co.	,,
,,	,,	John Chambers and Son (Limited)	,,
,,	,,	A. and T. Burt (Limited)	,,
,,	,,	Te Aro House Drapery Company (Limited)	,,
,,	,,	Castendyk and Focke	,,
,,	,,	R. and E. Tingey and Co. (Limited)	,,
,,	,,	A. R. Hislop	,,
,,	,,	Hutcheson, Wilson, and Co. (Limited)	,,
Benzine and benzoline		Vacuum Oil Company (Limited)	1/1½ and 1/6 per gal.
Bricks, red, ordinary	,,	P. Hutson and Co. (Limited)	47/6 per 1,000.
,, hand-pressed	,,	,, ,,	90/ ,,
Cement, New Zealand Portland	,,	Wilson's Portland Cement Company (Limited)	3/4 per cwt.
Drainpipes, stoneware	,,	H. Hill (Limited)	As per tender.
Explosives	,,	W. M. Bannatyne and Co.	,,
Firebricks and fireclay, New Zealand	,,	P. Hutson and Co. (Limited)	,,
Gasolene	,,	Vacuum Oil Company (Limited)	2/2 per gal.
Heaters, kerosene, 100 c.p. and 200 c.p.	,,	,, ,,	15/ and 20/ each.
Hoses, indiarubber, delivery	,,	A. R. Hislop	As per tender.
,, ,, ,, and suction	,,	Perdrian Rubber Company (Limited)	,,
Iron, bar, plate, sheet, and hoop	,,	Briscoe and Co. (Limited)	,,
,, galvanized corrugated	,,	J. Lysaght (Limited)	,,
Leather, buffalo, green	,,	McKerrow and Co.	1/2 and 1/4 per sq. ft.
Lime, ordinary	,,	J. J. Craig (Limited)	1/8 per bush.
,, hydraulic	,,	Wilson's Portland Cement Company (Limited)	1/9 ,,

RETURN No. 17—*continued.*

STATEMENT of STORES CONTRACTS, &c.—*continued.*

Service.	Period.	Name of Contractor.	Rate
Wellington—*continued.*			
Oil, kerosene, 150° test	31/3/1914	Vacuum Oil Company (Limited)	10d. per gal.
Oil-feeders, Kaye's patent	..	R. Wood	As per tender.
Steel (cast), all shapes	..	John Chambers and Son (Limited)	60/ per cwt.
,, double-shear	..	A. R. Hislop	60/ ,,
,, (mild), bar, plate, and sheet	..	Briscoe and Co. (Limited)	As per tender.
Thread and worsted	..	Sargood, Son, and Ewen (Limited)	,,
Christchurch—			
General stores	..	Ashby, Bergh, and Co. (Limited)	..
..	..	Craddock, Orr, and Co. (Limited)	..
..	..	E. Reece and Sons (Limited)	..
..	..	Aitken, Roberts, and Barrett	..
..	..	Smith and Smith (Limited)	..
..	..	Archer and Halliburton	..
..	..	Ross and Glendining (Limited)	..
..	..	M. W. Stevenson and Co.	..
..	..	Kempthorne, Prosser, and Co.	..
..	..	Sargood, Son, and Ewen (Limited)	..
..	..	Dalgety and Co. (Limited)	..
..	..	Castendyk and Focke	..
..	..	John Chambers and Son (Limited)	..
,,	..	A. and T. Burt (Limited)	,,
Benzine and benzoline	..	Vacuum Oil Company (Limited)	1/1¾ and 1/6 per gal.
Bricks, red, ordinary	..	J. Brightling	40/ and 45/ per 1,000.
Cement, New Zealand Portland	..	Christchurch Brick Company (Limited)	3/6½ per cwt.
Heaters, kerosene, 100 c.p. and 200 c.p.	,,	Vacuum Oil Company (Limited)	15/ and 20/ each.
Hoses, indiarubber, delivery and suction	,,	Perdrian Rubber Company (Limited)	As per tender.
Iron, bar and plate	,,	Andersons Limited	,,
Leather, buffalo, green	..	McKerrow and Co.	1/2 and 1/4 per sq. ft.
Lime, ordinary	..	J. J. Craig (Limited)	1/1½ per bush.
Oil, kerosene, 150° test	,,	Vacuum Oil Company (Limited)	10½d. per gal.
Steel, cast, all shapes	,,	John Chambers and Son (Limited)	65/ per cwt.
,, mild, bar and plate	,,	Andersons Limited	As per tender.
Dunedin—			
General stores	..	John Edmond	,,
..	..	Briscoe and Co. (Limited)	,,
..	..	J. Park and Co.	,,
..	..	A. and T. Burt (Limited)	..
..	..	Thomson, Bridger, and Co. (Limited)	..
..	..	Kempthorne, Prosser, and Co. (Limited)	..
..	..	Bing, Harris, and Co. (Limited)	..
..	..	Ross and Glendining (Limited)	..
..	..	Smith and Smith (Limited)	..
..	..	Castendyk and Focke	..
..	..	John Chambers and Son (Limited)	..
..	..	Michaelis, Hallenstein, and Co.	..
..	..	J. and T. Christie	..
..	..	Paterson and Barr (Limited)	..
..	..	Andrew Lees	..
..	..	Drummond and Co.	..
..	..	H. F. Stevens	..
..	..	Sargood, Son, and Ewen (Limited)	..
,,	..	Laidlaw and Gray	..
..	..	Ashby, Bergh, and Co. (Limited)	..
..	..	Craddock, Orr, and Co. (Limited)	..
..	..	E. Reece and Sons (Limited)	..
,,		Aitken, Roberts, and Barrett	,,
Benzine	..	Vacuum Oil Company (Limited)	1/1¾ per gal.
Bricks, red, ordinary	..	C. and W. Gore	35/ per 1,000.
,, hand-pressed		,,	60/ ,,
Cement, New Zealand Portland	..	Milburn Lime and Cement Company (Limited)	3/4 per cwt.
Drainpipes, stoneware	..	P. McSkimming and Son	As per tender.
Firebricks and fireclay	..	,,	,,
Gasolene	..	Vacuum Oil Company (Limited)	2/2¼ per gal.
Heaters, kerosene, 100 c.p. and 200 c.p.	..	..	15/ and 20/ each.
Hose, indiarubber, delivery and suction	..	Perdrian Rubber Company (Limited)	As per tender.
Indiarubber cloth-insertion	..	..	1/6 per lb.
Iron, galvanized, corrugated, and plain	..	J. Lysaght (Limited)	As per tender.

RETURN No. 17—*continued.*

STATEMENT of STORES CONTRACTS, &c.—*continued.*

Service.	Period.	Name of Contractor.	Rate.
Dunedin—*continued.*			
Leather, buffalo, green	31/3/1914	McKerrow and Co.	1/2 and 1/4 per sq. ft.
Lime, ordinary	,,	Milburn Lime and Cement Company (Limited)	10d. per bush.
,, hydraulic	..	J. J. Craig (Limited)	1/8 ,,
Oil, kerosene, 150° test	..	Vacuum Oil Company (Limited)	10⅛d. per gal.
Oil-feeders, Kaye's patent	..	R. Wood	As per tender.
Steel, cast, all shapes	..	John Chambers and Son (Limited)	68/ per cwt.
,, mild, bar and plate	..	Briscoe and Co. (Limited)	As per tender.
Invercargill—			
General stores	..	John Edmond	,,
..	..	Briscoe and Co. (Limited)	..
..	..	Broad, Small, and Co.	..
..	..	A. and T. Burt (Limited)	..
..	..	New Zealand Hardware Company (Limited)	..
..	..	Ross and Glendining (Limited)	,,
..	..	Bing, Harris, and Co. (Limited)	..
..	..	Sargood, Son, and Ewen (Limited)	,,
..	..	Kempthorne, Prosser, and Co. (Limited)	..
..	..	John Chambers and Son (Limited)	,,
..	,,	Dalgety and Co. (Limited)	,,
..	,,	Laidlaw and Gray	..
..	..	J. Park and Co.	..
..	..	Smith and Smith (Limited)	..
..	..	J. and T. Christie	..
..	..	Ashby, Bergh, and Co. (Limited)	..
..	..	E. Reece and Sons (Limited)	..
..	,,	Craddock, Orr, and Co. (Limited)	,,
..	..	Aitken, Roberts, and Barrett	,,
Benzine and benzoline	..	Vacuum Oil Company (Limited)	1/3¼ and 1/7¾ per gal.
Bricks, red, ordinary	..	C. and W. Gore	35/ per 1,000.
,, hand-pressed	..	,,	60/ ,,
Cement, New Zealand Portland	..	J. E. Watson and Co. (Limited)	3/10½ per cwt.
Drainpipes, stoneware	..	T. Todd and Sons	As per tender.
Firebricks and fireclay, New Zealand	..	P. McSkimming and Son	,,
Heaters, kerosene, 100 c.p. and 200 c.p.	..	Vacuum Oil Company (Limited)	15/ and 20/ each.
Hoses, indiarubber, delivery and suction	..	Perdrian Rubber Company (Limited)	..
Indiarubber, sheet and insertion	..	,,	5/6 and 1/6 per lb.
Iron, bar	..	Broad, Small, and Co. (Limited)	As per tender.
,, and plate	..	Briscoe and Co. (Limited)	,,
,, galvanized, corrugated	..	J. Lysaght (Limited)	,,
Leather, buffalo, green	..	McKerrow and Co.	1/2 and 1/4 per sq. ft.
Lime ordinary	..	J. E. Watson and Co. (Limited)	10d. per bush.
,, hydraulic	..	,, ,,	1/10 ,,
Oil, kerosene, 150° test	..	Vacuum Oil Company (Limited)	11¼d. per gal.
Oil-feeders, Kaye's patent	,,	R. Wood	As per tender.
Steel, cast, all shapes	..	John Chambers and Son (Limited)	68/ per cwt.
,, mild, bar and plate	,,	Briscoe and Co. (Limited)	As per tender.
Greymouth—			
General stores	..	D. McLean	..
..	..	Forsyth and McKay	..
..	..	Kempthorne, Prosser, and Co. (Limited)	..
..	..	Despatch Foundry Company (Limited)	..
..	..	E. M. Sheedy and Co.	..
..	..	Ross and Glendining (Limited)	..
..	..	Te Aro House Drapery Company (Limited)	..
..	..	W. Heinz	..
..	..	Griffen and Smith	..
..	..	Sargood, Son, and Ewen (Limited)	,,
Benzine and benzoline	..	Vacuum Oil Company (Limited)	1/3¾ and 1/8¼ per gal.
Cement, New Zealand Portland	..	Milburn Lime and Cement Company (Limited)	3/9 per cwt.
Heaters, kerosene, 100 c.p. and 200 c.p.	..	Vacuum Oil Company (Limited)	19/ and 24/ each.

RETURN No. 17—*continued.*

STATEMENT of STORES CONTRACTS, &c.—*continued.*

Service.	Period.	Name of Contractor.	Rate.
Greymouth—*continued.*			
Hoses, indiarubber, delivery and suction	31/3/1914	Perdrian Rubber Company (Limited) ..	As per tender.
Indiarubber, sheet	,,	E. M. Sheedy and Co.	3/3 per lb.
,, cloth-insertion ..	,,	Perdrian Rubber Company (Limited) ..	1/6 ,,
Lime, ordinary	,,	Milburn Lime and Cement Company (Limited)	1/ per bush.
Oil-feeders, Kaye's patent ..	,,	R. Wood	As per tender.
Soda, acetate of	,,	Castendyk and Focke	30/ per cwt.
Westport—			
General stores	,,	G. H. Gothard (Limited)	As per tender.
,, ...	,,	Martin and Co.	,,
,, ...	,,	Bailie and Co.	,,
,, ...	,,	Te Aro House Drapery Company (Ltd.)	,,
,, ...	,,	Ross and Glendining (Limited) ..	,,
,, ...	,,	Taylor, Enwright (Limited)	,,
,, ...	,,	Kempthorne, Prosser, and Co. (Limited)	,,
,, ...	,,	Sargood, Son, and Ewen (Limited) ..	,,
Benzine and benzoline	,,	Vacuum Oil Company (Limited) ..	1/3¾ and 1/8¼ per gal.
Explosives	,,	W. M. Bannatyne and Co. (Limited) ..	As per tender.
Drainpipes, stoneware	,,	J. J. Craig (Limited)	,,
Heaters, kerosene, 100 c.p. and 200 c.p.	,,	Vacuum Oil Company (Limited) ..	19/ and 24/ each.
Hoses, indiarubber, delivery and suction	,,	Perdrian Rubber Company (Limited) ..	As per tender.
Indiarubber, cloth-insertion ..	,,	,, ,, ..	1/6 per lb.
Oil, kerosene, 150° test	,,	Vacuum Oil Company (Limited) ..	1/ per gal.
Oil-feeders, Kaye's patent ..	,,	R. Wood	As per tender.
Soda, acetate of	,,	Castendyk and Focke	30/ per cwt.
Nelson—			
General stores	,,	Buxton and Co. (Limited)	As per tender.
,, ...	,,	Wilkins and Field Hardware Company (Limited)	,,
Brooms and brushes—			
Auckland	,,	J. Trevethick	,,
Wellington	,,	C. Trevethick	,,
Christchurch	,,	Otago Brush Company	,,
Dunedin	,,	,, ...	,,
Invercargill	,,	,, ...	,,
Painters' brushware	,,	Bunting and Co.	,,
Uniforms—			
Stationmasters	,,	Bing, Harris, and Co. (Limited) ..	,,
Guards and porters	,,	A. Levy	,,
Uniform caps—			
Stationmasters, summer	,,	Ross and Glendining (Limited) ..	9/3 each.
,, winter	,,	,, ,, ..	9/9 ,,
Drivers and firemen, summer ..	,,	,, ,, ..	3/4 ,,
,, winter ..	,,	,, ,, ..	4/4 ,,
Guards, summer	,,	,, ,, ..	5/3 ,,
,, winter	,,	,, ,, ..	5/6 ,,
Porters, summer	,,	,, ,, ..	3/6 ,,
,, winter	,,	,, ,, ..	3/9 ,,
White linen cap-covers	,,	,, ,, ..	10½d. ,,
Rainproof cap-covers	,,	,, ,, ..	2/ ,,
Wire rope at Auckland, Wellington, Christchurch, and Dunedin	,,	John Chambers and Son (Limited) ..	As per tender.
Candles and Soap—			
North Island sections	,,	The Union Oil, Soap, and Candle Company (Limited)	..
South Island sections	,,	McLeod Bros. (Limited)	,,

RETURN No. 17—*continued.*

STATEMENT of STORES CONTRACTS, &c.—*continued.*

Service.	Period.	Name of Contractor.	Rate.
Rope, New Zealand flax—			
North Island sections	31/3/1914	Donaghy's Rope and Twine Company (Limited)	As per tender.
South Island sections	,,	Maddren Bros.	,,
Disinfectants—			
Jeyes fluid	,,	A. C. Nottingham	5/ per gal.
,, powder	,,	,,	10/ per doz. 2 lb. tins.
Various	,,	Kempthorne, Prosser, and Co. (Limited)	As per tender.
Cartage at Auckland	31/3/1913	Cunningham and Co.	,,
,, Wellington	,,	John Keir	,,
Printing and stationery	,,	Government Printer	As per agreement.
Iron castings—			
Greymouth	,,	Dominion Ironworks	10/9 per cwt.
Westport	,,	G. Griffiths (Limited)	10/6 ,,
Oil, dark axle-	31/8/1912	James Service and Co.	10d. per gal.
,, filtered, valve-	,,	,,	1/9 ,,
,, mineral colza	,,	,,	9¼d. ,,
,, pale machinery-	,,	,,	10d. ,,
Loco-cylinder oil—			
6,000 gallons, Auckland	8/7/1913	Vacuum Oil Company (Limited)	1/8½ per gal.
15,000 ,, Wellington	,,	,, ,,	,,
4,000 ,, Lyttelton	,,	,, ,,	,,
5,000 ,, Port Chalmers	,,	,, ,,	,,
Pale machinery-oil—			
500 gallons, Auckland	,,	,, ,,	10¼d. per gal.
1,500 ,, Wellington	,,	,, ,,	,,
1,000 ,, Lyttelton	,,	,, ,,	,,
2,000 ,, Port Chalmers	,,	,, ,,	,,
Dark axle-oil—			
8,000 gallons, Auckland	,,	Phillips and Pike	1/1¼ per gal.
20,000 ,, Wellington	,,	,,	,,
8,000 ,, Lyttelton	,,	,,	,,
9,000 ,, Port Chalmers	,,	,,	,,
Mineral colza oil—			
20,000 gallons, Auckland	,,	,,	11d. per gal.
55,000 ,, Wellington	,,	,,	,,
20,000 ,, Lyttelton	,,	,,	,,
20,000 ,, Port Chalmers	,,	,,	,,
Castor-oil—			
15,000 gallons, Auckland	31/12/1912	Landale and Clark (Limited)	Calcutta rates.
30,000 ,, Wellington	,,	,, ,,	,,
8,000 ,, Lyttelton	,,	,, ,,	,,
12,000 ,, Dunedin	,,	,, ,,	,,
5,000 ,, Bluff	,,	,, ,,	,,
15,000 ,, Auckland	31/12/1913	,, ,,	,,
30,000 ,, Wellington	,,	,, ,,	,,
4,000 ,, Lyttelton	,,	,, ,,	,,
4,000 ,, Dunedin	,,	,, ,,	,,
2,000 ,, Bluff	,,	,, ,,	,,
Linseed-oil, double-boiled—			
3,000 gallons, Auckland	31/5/1913	,, ,,	,,
6,000 ,, Wellington	,,	,, ,,	,,
3,500 ,, Lyttelton	,,	,, ,,	,,
2,000 ,, Dunedin	,,	,, ,,	,,
Linseed-oil, raw—			
2,500 gallons, Auckland	,,	,, ,,	,,
4,000 ,, Wellington	,,	,, ,,	,,
2,000 ,, Lyttelton	,,	,, ,,	,,
1,500 ,, Dunedin	,,	,, ,,	,,
1,000 ,, Bluff	,,	,, ,,	,,
Ingot metals—			
Copper	31/3/1913	Noyes Bros. (Limited)	As per tender.
Lead	,,	Russel and Somers	Market rates.
Tin	,,	Mount Bischoff Tin-mining Company	,,
Varnish, Kearsley's—			
500 gallons pale finishing body	31/1/1913	Hayward Bros. and Co. (Limited)	17/3 per gal.
620 ,, hard-drying body	,,	,, ,, ,,	16/6 ,,
340 ,, hard-drying carriage	,,	,, ,, ,,	12/3 ,,
300 ,, best black japan	,,	,, ,, ,,	11/2 ,,
400 ,, gold-size	,,	,, ,, ,,	7/10½ ,,

RETURN No. 17—*continued.*

STATEMENT of STORES CONTRACTS, &c.—*continued.*

Service.	Period.	Name of Contractor.	Rate.
Coal-supply—			
Whangarei	31/3/1913	Hikurangi Coal Company (Limited)	9/ per ton.
Huntly	,,	Taupiri Coal-mines (Limited)	10/6 ,,
Auckland	,,	Westport Coal Company (Limited)	25/6 ,,
Onehunga	,,	Blackball Coal Company (Limited)	24/6 ,,
,,	,,	Westport Stockton Coal Company (Limited)	25/9 ,,
New Plymouth	,,	Blackball Coal Company (Limited)	25/6 ,,
,,	,,	Westport Stockton Coal Company (Limited)	26/3 ,,
,,	,,	J. A. Redpath and Sons	25/6 ,,
Wanganui	,,	Westport Coal Company (Limited)	28/ ,,
,,	,,	Blackball Coal Company (Limited)	26/6 ,,
,,	,,	Westport Stockton Coal Company (Limited)	27/3 ,,
,,	,,	J. A. Redpath and Sons	25/ ,,
Foxton	,,	Blackball Coal Company (Limited)	27/6 ,,
,,	,,	J. A. Redpath and Sons	27/ ,,
Wellington	,,	Westport Coal Company (Limited)	23/7 ,,
,,	,,	Blackball Coal Company (Limited)	22/1 ,,
,,	,,	Westport Stockton Coal Company (Limited)	22/10 ,,
Napier	,,	Blackball Coal Company (Limited)	25/6 ,,
Picton	,,	Neale and Haddon	24/ ,,
Nelson	,,	,,	21/6 ,,
Lyttelton	,,	Westport Coal Company (Limited)	24/6 ,,
,,	,,	Blackball Coal Company (Limited)	23/ ,,
,,	,,	Westport Stockton Coal Company (Limited)	23/9 ,,
Timaru	,,	Westport Coal Company (Limited)	26/ ,,
,,	,,	Westport Stockton Coal Company (Limited)	25/3 ,,
Oamaru	,,	Westport Coal Company (Limited)	26/ ,,
,,	,,	Blackball Coal Company (Limited)	24/6 ,,
,,	,,	Westport Stockton Coal Company (Limited)	25/3 ,,
Dunedin	,,	Westport Coal Company (Limited)	25/6 ,,
Milton	,,	Bruce Railways and Coal Company	8/4 ,,
Stirling	,,	New Zealand Coal and Oil Company (Limited)	10/ ,,
Bluff	,,	Westport Coal Company (Limited)	26/ ,,
Nightcaps	,,	Nightcaps Coal Company (Limited)	8/6 ,,
Grey ironbark timber, hewn and sawn—			
Kaihu Section	,,	J. W. Wallace and Co.	30/ per 100 ft.
Whangarei ,,	,,	Fraser and Co.	32/ ,,
Auckland ,,	,,	,,	29/6 & 30/6 ,,
Ohakune ,,	,,	,,	30/ & 32/6 ,,
Wanganui ,,	,,	,,	31/6 & 35/6 ,,
Wellington–Napier ,,	,,	,,	30/ & 32/6 ,,
Gisborne ,,	,,	,,	31/ ,,
Christchurch ,,	,,	,,	30/ ,,
Dunedin ,,	,,	,,	30/ to 33/ ,,
Invercargill ,,	,,	,,	28/ ,,
Westland ,,	,,	,,	31/ ,,
Westport ,,	,,	,,	30/ ,,
Nelson ,,	,,	,,	32/6 ,,
Picton ,,	,,	Richardson, Blair, and McCabe (Limited)	27/6 & 33/6 ,,
Grey ironbark piles—			
Auckland Section	,,	Fraser and Co.	2/10 per lin. ft.
Wanganui ,,	,,	,,	3/3 ,,
Wellington–Napier ,,	,,	,,	2/8 ,,
Christchurch ,,	,,	,,	2/11 ,,
Dunedin ,,	,,	,,	2/8 & 2/9 ,,
Invercargill ,,	,,	,,	2/8 & 2/9 ,,
Westland ,,	,,	,,	2/10 ,,
New South Wales hardwood, sawn—			
For Newmarket shops—			
Tallow-wood	,,	Richardson, Blair, and McCabe (Limited)	31/ per 100 ft.
For Petone shops—			
Ironbark	,,	,,	36/ ,,
Tallow-wood	,,	,,	31/6 ,,
Spotted-gum	,,	,,	29/10 ,,
For Eastown shops—			
Ironbark	,,	,,	33/ ,,
Spotted-gum	,,	,,	31/ ,,
For Addington shops—			
Tallow-wood	,,	,,	31/ ,,

RETURN No. 17—*continued.*

Statement of Stores Contracts, &c.—*continued.*

Service.	Period.	Name of Contractor.	Rate.
New South Wales hardwood, sawn—*continued.*			
For Hillside shops—			
Ironbark	31/3/1913	Richardson, Blair, and McCabe (Limited)	36/ per 100 ft.
Tallow-wood	,,	,, ,, ,, ,,	31/6 ,,
Spotted-gum	,,	,, ,, ,, ,,	29/10 ..
For Invercargill shops—			
Tallow-wood	,,	,, ,, ,, ,,	31/6 ,,
Spotted-gum	,,	,, ,, ,, ,,	29/10 ,,
Ironbark timber, hewn—			
Auckland	,,	J. W. Wallace and Co.	27/3 to 37/ ,,
Wellington	,,	,,	29/6 to 33/ ,,
Lyttelton	,,	,,	29/6 to 37/6 ,,
Dunedin	,,	,,	29/6 to 37/ ..
Bluff	,,	,,	29/6 to 35/ ..
Ironbark piles—			
Auckland	,,	,,	2/9½ per lin. ft.
Wellington	,,	,,	2/9½ ,,
Lyttelton	,,	,,	2/8 ,,
Dunedin	,,	,,	2/9½ ..
New South Wales hardwood, sawn—			
For Loco shops	,,	,,	19/ to 25/ per 100 ft. f.o.b., Sydney.
Native timber—			
1,300,000 super. ft. kauri	,,	Mills and merchants	Tender and schedule rates.
1,433,000 ,, red-pine	,,	,,	Ditto.
51,000 ,, white-pine	,,	,,	,,
87,000 ,, totara	,,	,,	,,
214,000 ,, for powellizing	,,	,,	,,
4,000 ,, mangaio	,,	,,	,,
81,000 ,, birch	,,	,,	,,
47,000 ,, yellow-pine	,,	,,	,,
Native timber produced forway Rail Department—			
3,095,000 super. ft. various	,,	State Sawmill, Kakahi	Schedule rates.
Jarrah timber—			
1,050,000 super ft.	,,	Millar's W.A. Hardwoods Company	20/ to 32/ per 100 super. ft.
Oregon pine—			
14,000 super. ft.	,,	Merchants in New Zealand	Various.
Sleeper-supply—			
95,000 native	,,	Settlers and mills	3/ to 4/3 each.
119,000 for powellizing	,,	,,	2/ ,,
25,000 New South Wales hardwood	,,	J. W. Wallace and Co.	4/8 to 4/11 ,,
250,000 jarrah	,,	Millar's W.A. Hardwoods Company	4/9 ,,
250,000 jarrah	31/12/1913	The S.W. Timber Hewers' Co-operative Association	4/10 ,,

RETURN No. 18.

STATEMENT of WEIGHING-MACHINES, WEIGHBRIDGES, TRAVERSERS, TURNTABLES, CRANES, and PUMPS for the Year ending 31st March, 1913.

Description.	Whangarei-Kawakawa.	Kaihu.	Gisborne.	North Island Main Line and Branches.	South Island Main Line and Branches.	Westland.	Westport.	Nelson.	Picton.	Total.
WEIGHING-MACHINES—										
¼ cwt. . .	..	..	..	2	..	..	..	..	..	2
½ ″	..	..	..	..	1	..	..	..	..	1
1 ″	..	..	..	1	1	6	1	..	..	9
1½ ″	..	..	..	1	..	..	1	..	..	2
2 ″	..	1	..	15	10	1	..	..	..	27
2¼ ″	1	..	..	..	12	..	..	..	..	13
2½ ″	..	..	..	..	4	..	..	..	..	4
3 ″	..	..	..	9	9	4	..	3	..	25
3½ ″	..	..	..	..	1	..	..	..	..	1
4 ″	1	..	..	52	30	3	..	..	..	86
5 ″	2	..	..	29	34	1	2	6	1	75
5½ ″	..	..	..	..	5	..	..	..	..	5
6 ″	..	1	2	32	41	2	1	..	..	79
6½ ″	..	..	..	..	1	..	..	..	..	1
7 ″	1	..	..	10	8	1	..	..	..	20
8 ″	..	..	..	9	9	..	..	..	..	18
9 ″	..	..	..	3	3	..	..	..	..	6
10 ″	3	..	..	49	57	11	2	..	3	125
11 ″	..	1	1	16	35	..	..	3	..	56
12 ″	..	..	..	5	10	..	..	..	..	15
12½ ″	..	..	..	..	1	..	..	..	..	1
13 ″	..	..	..	3	9	..	..	..	..	12
14 ″	..	..	..	2	3	..	..	..	..	5
15 ″	..	..	..	8	10	..	..	..	..	18
16 ″	..	1	1	15	22	..	..	2	..	41
20 ″	..	..	..	1	6	..	..	..	1	8
22 ″	..	..	..	7	11	..	1	..	..	19
23 ″	..	..	..	..	1	..	..	..	..	1
25 ″	..	..	..	..	2	..	..	..	..	2
60 ″	..	..	..	3	2	..	..	..	..	5
200 lb.	..	..	..	..	1	..	..	..	..	1
224 ″	..	..	..	..	1	..	..	..	..	1
240 ″	..	..	..	..	4	..	..	..	..	4
244 ″	..	..	..	..	4	..	..	..	..	4
248 ″	..	..	..	..	1	..	..	..	..	1
250 ″	..	..	..	..	1	..	..	..	..	1
600 ″	..	..	..	..	1	..	..	..	..	1
900 ″	..	..	..	..	2	..	..	..	..	2
Totals	8	4	4	272	353	29	8	14	5	697
WEIGHBRIDGES :—										
3 tons (cart)	..	..	..	1	1	..	..	..	..	2
6 ″ ″	..	..	..	..	1	..	..	..	..	1
7 ″ ″	..	..	..	..	1	..	..	.	..	1
8 ″ ″	..	..	..	..	1	..	..	..	..	1
10 ″ ″	..	..	..	..	2	..	..	..	..	2
15 ″ ″	..	..	..	..	2	..	..	..	..	2
10 ″ (wagon)	..	..	..	..	1	..	..	..	..	1
11 ″ ″	..	..	..	2	..	..	..	..	..	2
12 ″ ″	..	..	..	3	2	..	..	1	1	7
14 ″ ″	..	..	..	1	1	..	..	..	..	2
15 ″ ″	..	..	..	1	..	..	..	..	..	1
20 ″ ″	1	..	1	12	17	..	1	..	1	33
25 ″ ″	..	..	..	7	6	2	4	..	..	19
30 ″ ″	..	..	..	1	2	..	..	..	..	3
40 ″ ″	..	..	..	..	1	..	..	..	..	1
Totals	1	..	1	28	38	2	5	1	2	78
TRAVERSERS	..	..	..	2	21	..	..	2	1	26
TURNTABLES :—										
43-feet (engine)	..	..	..	..	1	..	..	..	..	1
50 ″ ″	..	..	..	21	29	2	..	..	..	52
55 ″ ″	..	..	..	9	16	..	..	..	..	25
12 ″ (wagon)	..	..	..	..	3	..	..	..	..	3
13 ″ ″	..	..	..	8	33	..	..	1	..	42
14 ″ ″	..	..	..	4	8	1	..	1	..	14
Totals	..	..	..	42	90	3	..	2	..	137

RETURN No. 18—*continued*.

STATEMENT of WEIGHING-MACHINES, &c.—*continued*.

Description.	Whangarei–Kawakawa.	Kaihu.	Gisborne.	North Island Main Line and Branches.	South Island Main Line and Branches.	Westland.	Westport.	Nelson.	Picton.	Total.
CRANES :—										
¼-ton, stationary, hand	..	..	..	1	..	..	...	..	..	1
½ " " "	..	..	..	..	1	..	..	..	..	1
1 " " "	..	..	..	21	7	..	..	..	..	28
1½ " " "	..	..	..	45	21	3	..	3	3	75
2 " " "	..	..	..	6	12	..	..	2	..	20
3 " " "	..	..	..	..	3	..	..	..	..	3
4 " " "	..	..	..	10	28	..	..	..	..	38
5 " " "	..	..	..	2	2	3	..	..	..	7
7 " " "	..	..	..	1	3	..	..	..	..	4
10 " " "	..	..	..	4	4	..	..	..	..	8
15 " " "	..	..	..	..	2	..	..	..	..	2
½ " " hydraulic	..	..	..	..	1	..	..	..	..	1
1½ " " "	..	..	..	3	..	..	..	..	..	3
8 " " "	..	..	..	..	..	2	..	..	..	2
10 " " "	..	..	..	..	..	1	..	..	..	1
½ " travelling, overhead	..	..	..	3	..	..	..	..	..	3
1 " " "	..	..	..	20	7	1	3	..	..	31
1½ " " "	..	..	..	3	..	..	..	..	..	3
2 " " "	..	..	..	3	..	..	..	1	..	4
3 " " "	..	..	..	1	..	..	..	..	..	1
2 " " hand	..	..	..	8	..	2	1	1	1	13
3 " " "	..	..	..	..	2	..	..	..	..	2
5 " " "	..	..	..	9	4	2	1	1	1	18
6 " " "	..	..	..	..	1	..	..	..	..	1
8 " " "	..	..	1	..	..	..	..	..	..	1
10 " " "	..	..	..	1	1	..	..	..	..	2
¾ " " steam	..	..	..	..	2	..	..	..	..	2
1½ " " "	..	..	..	1	1	..	..	1	..	3
2 " " "	..	..	..	1	5	..	..	..	1	7
3 " " "	3	..	..	1	9	..	1	..	1	15
5 " " "	..	..	..	2	4	1	..	..	..	7
7 " " "	2	..	..	6	7	1	..	..	..	16
7½ " " "	..	..	..	..	1	..	..	..	..	1
12 " " "	..	..	..	..	..	1	1	..	..	2
15 " " "	..	..	..	..	..	..	1	..	..	1
20 " " "	..	..	..	..	..	..	3	..	..	3
Pile-driving and hoisting engines, steam	..	..	..	19	9	1	2	..	2	33
Totals	5	..	1	171	137	18	13	9	9	363
WATER-SERVICES :—										
Steam	1	1	..	5	11	2	1	..	..	21
Hand	1	2	2	49	83	4	..	1	5	147
Windmill	..	1	1	26	58	2	..	1	6	95
Hot-air	1	..	1	2	11	1	..	1	1	18
Hydraulic	..	..	..	30	26	2	..	..	..	58
Oil	2	..	1	35	16	2	..	..	..	56
Gravitation	7	2	2	63	46	17	7	6	..	150
Gas-engine	..	..	..	1	2	..	..	..	..	3
Totals	12	6	7	211	253	30	8	9	12	548

RETURN NO. 19.

STATEMENT of RAILS RELAID during the Year ending 31st March, 1913.

Weight.	Whangarei–Kawakawa.	Kaihu.	Gisborne.	North Island Main Line and Branches.	South Island Main Line and Branches.	Westland.	Westport.	Nelson.	Picton.	Total.
RAILS RELAID :—										
55 lb. steel	..	..	..	..	240	..	..	..	..	240
56 "	..	..	..	..	..	..	..	..	..	..
70 "	..	..	..	12,906	7,694	903	..	..	..	21,503
Totals	..	..	..	12,906	7,934	903	..	..	..	21,743

RETURN No. 20.

STATEMENT of SLEEPERS RELAID and REMOVED during the Year ending 31st March, 1913.

Description.	Whangarei-Kawakawa.	Kaihu.	North Island Main Line and Branches.	Gisborne.	South Island Main Line and Branches.	Westland.	Westport.	Nelson.	Picton.	Total.
SLEEPERS RELAID :—										
Totara	275	141	13,537	18	..	..	..	..	3	13,974
Jarrah	5	..	45,977	..	67,935	71	19	..	14	114,021
Silver-pine	..	..	16,258	..	80	6,106	387	170	1,291	24,292
Puriri	258	104	569	..	..	..	..	..	..	931
Creosoted	..	..	185	..	..	..	..	..	..	185
Ironbark	..	..	4,287	..	141	826	4	..	..	5,258
Powellized	..	..	14,606	..	49,942	..	..	..	..	64,548
Matai	..	..	7,828	..	..	..	..	..	..	7,828
Birch	..	..	3,693	..	98	..	..	..	..	3,791
Grey-gum	..	..	550	..	..	..	..	..	..	550
Total..	538	245	107,490	18	118,196	7,003	410	170	1,308	235,378
SLEEPERS REMOVED :—										
Matai	..	..	31	..	21,218	..	..	67	..	21,316
Totara	242	..	62,402	..	26,844	..	..	..	..	89,488
Birch	..	..	75	..	7,996	272	264	103	883	9,593
Jarrah ..	..	..	12,259	..	8,108	..	..	..	..	20,367
Silver-pine	71	..	657	18	20,895	6,398	146	..	423	28,608
Puriri	141	60	36,963	..	2,062	..	..	..	..	39,226
Creosoted	..	..	2,267	..	18,808	..	..	..	..	21,075
Ironbark	..	..	1,109	..	637	..	..	..	..	1,746
Grey-gum	..	..	2	..	2,897	..	..	..	..	2,899
Kauri	44	185	62	..	..	..	..	..	..	291
Maire	..	..	615	..	..	..	..	..	..	615
Blue-gum	..	..	..	..	258	..	..	..	..	258
Rimu	..	..	168	..	..	..	..	..	..	168
Kamai	..	..	..	..	91	..	..	..	..	91
Total ..	498	245	116,610	18	109,814	6,670	410	170	1,306	235,741

RETURN No. 21.

RETURN of NUMBER of STATIONS and PRIVATE SIDINGS on each Section for the Year ending 31st March, 1913.

Sections.	Miles	chains.	Number of Stations and Stopping-places on the Time-tables.	Number of Private Sidings.		
				At Stations.	Out of Stations.	Total.
Whangarei-Kawakawa	57	72	25	3	4	7
Kaihu	17	15	10	..	2	2
Gisborne	31	50	14	2	2	4
North Island Main Line and Branches	1,100	50	390	92	42	134
South Island Main Line and Branches	1,367	13	513	148	28	176
Westland	141	13	68	25	5	30
Westport	35	78	17	..	3	3
Nelson	60	20	23	3	1	4
Picton	48	19	20	4	1	5
Totals	2,860	10	1,080	277	88	365

RETURN No. 22.

COMPARATIVE STATEMENT of MILEAGE of RAILWAYS OPEN for TRAFFIC and UNDER MAINTENANCE on 31st March, 1913.

Section.	Mileage open for Traffic on 31st March, 1912.	Additional Lengths opened during Year.			Reduced Mileage equivalent to Maintenance for whole Period.	Length closed during Year.		Net Addition to Mileage open for Traffic.	Net Addition to Mileage under Maintenance.	Total Mileage open for Traffic on 31st March, 1913.	Equivalent Total Mileage maintained during Financial Year ended 31st March, 1913.
		Line opened.	Date of Opening.	Length opened.		Line.	Length.				
	M. ch.			M. ch.	M. ch.		M. ch.	M. ch.	M. ch.	M. ch.	M. ch.
Whangarei–Kawakawa ..	57 72	..	..	..	..	..	..	..	..	57 72	57 72
Kaihu	17 15	..	..	..	..	..	..	..	..	17 15	17 15
North Island Main Line and Branches	1,083 12	Te Hana – Kaiwaka .. Te Wera – Pohokura ..	18th March, 1913 1st August, 1912	8 67 8 51	0 27 5 60	.. ..	.. ..	17 38	6 07	1,100 50	1,089 19
Gisborne	23 51	Waikohu–Otoko ..	6th April, 1912 ..	7 79	7 70	..	..	7 79	7 70	31 50	31 41
South Island Main Line and Branches	1,356 18	Mina–Parnassus ..	2nd September, '12	8 51	4 79	..	..	8 51	4 79	1,364 69	1,361 17
Ditto, Private Line—Nightcaps Branch	2 24	..	..	..	..	..	..	..	..	2 24	2 24
Westland	141 13	..	..	..	..	..	..	..	..	141 13	141 13
Westport	30 17	Westport–Te Kuha ..	1st April, 1912 ..	5 61	5 61	..	..	5 61	5 61	35 78	35 78
Nelson	47 55	Kiwi–Glenhope ..	2nd September, '12	12 45	7 21	..	..	12 45	7 21	60 20	54 76
Picton	48 19	..	..	..	..	..	..	..	..	48 19	48 19
Totals	2,807 56	..	..	52 34	31 78	..	..	52 34	31 78	2,860 10	2,839 54

RETURN No. 23.

STATEMENT showing WEIGHTS of RAILS in various LINES on 31st March, 1913.

Line	40 lb. Iron.	40 lb. Steel.	45 lb. Steel.	52 lb. Iron.	52 lb. Steel.	53 lb. Steel.	55 lb. Steel.	56 lb. Iron.	56 lb. Steel.	65 lb. Steel.	70 lb. Iron.	70 lb. Steel.	100 lb. Steel.	Total
	M. ch.	M. ch.	M. ch.	M. ch.	M. ch.	M. ch.	M. ch.	M. ch.	M. ch.	M. ch.	M. ch.	M. ch.	M. ch.	M. ch.
Whangarei-Kawakawa Section—														
Onerahi-Opua	..	..	..	..	..	24 44	28 12	0 50	4 46	..	..	..	..	57 72
Kaihu Section—														
Dargaville-Kaihu	..	..	..	..	..	17 15	..	..	..	..	..	..	..	17 15
North Island Main Line and Branches—														
Auckland-Wellington	..	..	..	..	..	31 66	..	..	46 42	26 38	..	321 11	..	425 77
Newmarket-Kaiwaka	..	..	..	..	..	12 26	17 18	..	21 61	..	..	30 15	..	81 40
Penrose-Onehunga	..	0 10	..	..	..	2 23	..	..	..	..	..	0 26	..	2 59
Frankton-Thames	..	..	..	..	..	26 0	..	..	18 77	..	..	17 78	..	62 75
Paeroa-Waihi	..	..	..	..	..	..	..	..	12 24	..	..	..	..	12 24
Cambridge Branch	..	0 8	..	..	..	6 73	2 34	..	2 41	..	..	0 5	..	12 1
Morrinsville-Rotorua	..	0 21	..	..	..	68 29	..	..	0 6	..	..	0 4	..	68 60
Marton-New Plymouth	..	..	..	..	..	28 54	..	..	41 79	..	..	66 12	..	136 65
Waitara Branch	0 14	0 48	..	..	..	3 80	..	..	..	..	..	..	..	4 62
Stratford-Pohokura	..	..	..	..	..	15 45	15 45	..	0 30	..	..	..	..	31 40
Mount Egmont Branch	..	..	..	..	..	..	..	..	6 2	..	..	..	..	6 2
Aramoho-Wanganui	..	..	..	0 18	..	..	..	..	1 79	..	..	1 3	..	3 20
Foxton Branch	..	..	..	8 44	..	10 69	..	..	..	..	..	..	..	19 33
Palmerston-Spit	..	1 12	..	..	..	22 76	..	..	36 7	..	..	53 57	..	113 72
Wellington-Woodville	..	..	..	0 3	..	19 6	..	..	17 9	..	..	78 25	..	114 43
Greytown Branch	..	..	..	3 7	..	..	..	..	..	..	..	..	..	3 7
Te Aro Branch	..	..	..	..	..	1 9	..	..	0 1	..	..	..	..	1 10
Gisborne Section—														
Gisborne-Otoko	0 20	..	..	..	..	..	13 48	..	17 62	..	..	..	..	31 50
South Island Main Line and Branches—														
Lyttelton-Bluff	..	..	..	..	..	14 27	..	..	15 67	..	..	360 17	1 50	392 1
Addington-Culverden	..	..	..	..	..	36 40	..	..	0 8	..	4 23	26 66	..	67 57
Oxford Branch	0 11	11 47	..	..	..	18 40	..	..	3 26	..	..	0 1	..	33 45
Eyreton Branch	5 33	0 3	..	..	..	14 55	..	..	..	..	..	..	..	20 11
Waipara-Parnassus	..	..	..	..	..	..	12 35	..	31 46	..	..	..	..	44 01
Southbridge Branch	..	..	..	..	..	23 19	1 0	..	1 20	..	..	..	..	25 39
Little River Branch	..	12 49	6 27	1 59	..	0 32	..	1 41	..	..	..	..	..	22 48
Springfield Branch	..	..	..	..	..	4 57	4 60	..	30 17	..	..	17 66	..	57 40
White Cliffs Branch	..	..	..	..	..	11 46	..	..	..	..	..	..	..	11 46
Rakaia Forks Branch	..	..	..	..	22 20	..	..	..	..	..	..	..	..	22 20
Mount Somers Branch	3 33	24 3	..	..	..	..	..	..	..	..	..	..	..	27 36
Albury Branch	10 54	9 38	..	..	..	10 64	..	..	5 17	..	..	..	..	36 13
Waimate Branch	0 7	..	..	..	2 2	2 37	..	..	..	..	..	..	..	4 46
Waimate Gorge Branch	..	..	..	8 21	..	..	..	..	..	..	..	..	..	8 21
Duntroon Branch	11 4	0 12	..	4 34	..	21 71	..	..	..	..	..	..	..	37 41
Oamaru Breakwater Branch	0 23	..	..	..	..	0 40	..	..	..	..	..	..	..	0 63
Carried forward	31 39	60 11	6 27	26 26	24 22	451 23	95 12	2 11	315 47	26 38	4 23	973 66	1 50	2,018 75

RETURN No. 23—*continued*.

STATEMENT showing WEIGHTS of RAILS in Various LINES on 31st March, 1913—*continued*.

Line.	40 lb. Iron.	40 lb. Steel.	45 lb. Steel.	52 lb. Iron.	52 lb. Steel.	53 lb. Steel.	55 lb. Steel.	56 lb. Iron.	56 lb. Steel.	65 lb. Steel.	70 lb. Iron.	70 lb. Steel.	100 lb. Steel.	Total.
	M. ch.	M. ch.	M. ch.	M. ch.	M. ch.	M. ch.	M. ch.	M. ch.	M. ch.	M. ch.	M. ch.	M. ch.	M. ch.	M. ch.
Brought forward	31 39	60 11	6 27	26 26	24 22	451 23	95 12	2 11	315 47	26 38	4 23	973 66	1 50	2,018 75
South Island Main Line and Branches—*continued*.														
Ngapara Branch	..	..	..	..	..	11 44	..	..	3 45	..	..	..	..	15 9
Livingstone Branch	11 46	0 29	..	..	..	..	..	..	..	..	..	..	..	11 75
Waihemo Branch	..	7 5	..	0 59	..	0 1	..	..	1 0	..	..	..	..	8 65
Port Chalmers Branch	..	..	..	..	..	0 17	..	..	..	..	..	1 9	..	1 26
Walton Park Branch	0 7	..	..	..	..	1 55	..	..	0 67	..	..	..	..	2 49
Fernhill Branch	..	0 14	..	..	..	1 43	..	..	..	..	..	..	..	1 57
Otago Central Railway	..	..	..	..	..	65 73	3 0	..	65 58	..	..	..	..	134 51
Outram Branch	0 61	0 47	..	..	..	5 6	0 69	..	1 57	..	..	..	..	9 0
Lawrence Branch	0 4	..	..	..	..	1 29	12 70	..	15 9	..	..	..	..	29 32
Catlin's River Branch	..	..	..	0 25	..	19 2	2 30	..	3 37	..	..	..	..	25 14
Tapanui Branch	4 9	6 14	..	..	..	8 45	0 54	..	6 59	..	..	..	..	26 21
Waikaka Branch	..	..	..	..	..	..	12 55	..	..	..	..	0 2	..	12 57
Wyndham Branch	..	..	..	..	..	9 13	..	..	..	..	..	0 22	..	9 35
Seaward Bush Branch	..	16 50	..	..	..	1 66	8 26	..	7 3	..	..	..	..	33 65
Invercargill–Kingston	..	..	..	..	..	44 58	..	..	23 47	..	10 60	7 75	..	87 0
Makarewa–Tuatapere	..	..	..	..	..	17 76	8 6	..	10 21	..	..	12 0	..	48 23
Thornbury–Nightcaps	..	2 27	..	..	..	..	..	..	..	..	..	22 24	..	24 51
Forest Hill Branch	12 66	..	..	..	..	..	..	..	..	..	..	..	..	12 66
Mararoa Branch	..	10 16	..	..	..	0 24	..	..	0 1	..	..	..	..	10 41
Waimea Plains Railway	..	..	..	27 26	..	4 63	..	..	0 72	..	..	3 40	..	36 41
Riversdale–Switzers	..	..	..	..	..	1 77	11 69	..	..	..	..	0 1	..	13 67
Westland Section—														
Greymouth–Otira	..	..	..	..	..	28 41	..	..	11 30	..	..	10 57	..	50 48
Greymouth–Ross	..	..	..	..	..	18 26	..	..	17 43	..	..	2 40	..	38 29
Stillwater–Cronadun	..	..	..	..	..	31 25	0 22	..	6 64	..	..	5 35	..	43 66
Blackball–Ngahere	..	..	..	..	..	..	1 0	..	2 31	..	..	..	..	3 31
Coal Creek Branch	..	..	..	..	..	0 15	..	..	4 62	..	..	0 2	..	4 79
Westport–Mokihinui	..	..	..	0 16	..	10 71	..	..	3 76	..	..	15 14	..	30 17
Westport–Te Kuha	..	..	..	..	..	..	5 61	..	..	..	..	..	..	5 61
Nelson–Glenhope	0 2	0 1	..	1 1	..	24 41	17 60	..	16 75	..	..	..	..	60 20
Picton–Ward	0 10	..	..	1 16	..	15 67	14 55	..	16 29	..	..	0 2	..	48 19
Totals	61 4	103 54	6 27	57 09	24 22	776 41	195 29	2 11	535 53	26 38	15 3	1,054 69	1 50	2,860 10

RETURN No. 24.

PARTICULARS of PRIVATE-SIDING TRAFFIC, showing Value of Traffic done during Twelve Months ending 31st March, 1913.

Hd. Office Reg. No.	Papers.	Date of Grant.	Present Holder.	Position.	Nearest Station.	By whom paid for.	Term of Grant.	Amount of Traffic guaranteed per Annum.	Liquidated Damages or Premium.	Value of the Traffic through the Siding during the Year ending 31st March, 1913. In.	Out.	Total.
			WHANGAREI SECTION.									
				M. ch.					£ s. d.	£ s. d.	£ s. d.	£ s. d.
1226	R. 04/3988	Mar. 1, 1910	Northern Coal Company (Limited)	..	Waro	†	5 years*	†	Repairs, £18 0s. 6d.	24 13 7	5,828 10 8	5,853 4 3
1230	R. 05/3060	July 1, 1910	R. P. Gibbons (Limited)	..	Hikurangi	†	5 „ *	†	Repairs, £2	..	1,020 7 7	1,020 7 7
1252	R. 08/3024	Sept. 1, 1910	North New Zealand Coal and Cement Company (Limited)	..	Kamo	Grantees	5 „ *	Premium	180 0 0	1 18 3	1,004 8 6	1,006 6 9
1306	R. 02/551	Jan. 1, 1907	Hikurangi Coal Company (Limited)	..	Waro	†	5 „ *	†	Repairs, £15 10s. 3d.	59 16 11	6,835 3 8	6,895 0 7
1319	R. 12/531	April 1, 1912	Kauri Timber Company (Limited)	..	Waipuna	Grantees	5 „ *	Premium	712 0 0	2,247 5 10	544 10 7	2,791 16 5
1320	R. 02/550	Jan. 1, 1907	Hikurangi Coal Company, Northern Coal Company, and J. R. Reyburn	..	„	Govt.	5 „ *	..	..	210 1 9	200 15 1	410 16 10
1383	R. 06/3579	Oct. 26, 1912	A. L. Stokes	20 60	Whakapara	†	5 „ *	†	Repairs, £3/2/9	264 0 5	794 11 1	1,058 11 6
			KAIHU SECTION.									
1286	R. 06/2737	Oct. 1, 1911	H. P. Clear	3 2	Flax-mill	†	5 years*	†	..	81 8 6	26 4 7	107 13 1
1315	R. 02/1438	Jan. 1, 1912	James Trounson	16 15	Kaihu Booms	Govt.	5 „ *	..	..	182 18 0	553 1 6	735 19 6
			GISBORNE SECTION.									
956	R. 05/901	July 1, 1905	New Zealand Shipping Company (Limited)	..	Gisborne	Grantees	10 years*	Premium	250 0 0 Rental, £25	358 5 10	2 17 6	361 3 4
1099	R. 07/4316	Nov. 1, 1908	Gisborne Borough Council	..	„	„	5 „ *	„	150 0 0	707 19 11	..	707 19 11
1227	R. 09/2717	May 1, 1910	Gisborne Borough Council	..	„	„	5 „ *	„	260 0 0	64 2 1	..	64 2 1
1364	R. 03/106	Aug. 1, 1912	Gisborne Borough Council	12 21	Kaiteratahi	Govt.	5 „ *	..	..	2 11 8	713 11 11	716 3 7
1389	R. 11/4503	Mar. 1, 1913	Gisborne Sheep-farmers' Frozen Meat Company (Limited)	..	Gisborne	Grantees	10 „ *	Premium	741 0 0 Rental, £50	..	..	..
			NORTH ISLAND MAIN LINE AND BRANCHES.									
866	R. 93/3515	Oct. 1, 1903	Carr, Pountney, and Co.	..	Morrinsville	Grantees	10 years*	†	Rental, £25	69 7 9	104 10 4	173 18 1
885	R. 04/956	May 11, 1904	A. and G. Price	..	Thames	Govt.	Indefinite	..	..	..	..	..
912	R. 99/1973	July 1, 1904	Firth Pumice Company (Limited)	58 11	Ohinewai	Govt. and grantees	10 years*	†	Rental, £50	164 10 2	466 4 7	630 14 9
919	R. 04/2222	Oct. 1, 1904	Auckland Farmers' Freezing Company (Limited)	6 64	Westfield	Grantees	10 „ *	Premium	358 0 0 Rental, £50	8,675 3 4	2,886 13 10	11,561 17 2
977	R. 02/1392	Mar. 1, 1906	Bartholomew Land and Timber Company (Limited)	43 20	Ngatira	„	10 „ *	„	896 0 0 Rental, £50	219 8 1	4,580 5 9	4,799 13 10
989	R. 03/4035	Nov. 9, 1905	Waihi Gold-mining Company (Limited)	..	Waikino	Govt.	10 „ *	†	..	5,314 9 9	85 18 9	5,400 8 6
990	R. 03/4035	Feb. 1, 1906	N.Z. Crown Mines Company (Limited)	..	Karangahake	„	10 „ *	..	..	615 18 8	..	615 18 8
1010	R. 06/3300	Nov. 1, 1906	Auckland City Council	..	Westfield	Grantees	10 „ *	Premium	426 0 0 Rental, £25	109 18 10	1,194 16 2	1,304 15 0

1079	R. 03/2232 ..	May 1, 1908	Taupiri Coal-mines Company (Limited)	..	Huntly ..		5 „ * ..	„ ..	15 18 1	195 8 3	45,528 10 2	45,723 18 3
1085	R. 06/3864 ..	Aug. 1, 1908	Dalgety and Co. (Limited) ..	..	Auckland ..	„	10 „ * ..	„ ..	156 10 0 Rental, £50	306 19 8	17 16 11	324 16 7
1106	R. 08/1608 ..	Feb 1, 1909	Morningside Quarry (Limited) ..	..	Morningside ..	„	5 „ * ..	„ ..	479 10 0	..	1,499 2 6	1,499 2 6
1111	R. 08/3737 ..	Jan. 1, 1909	Taringamutu Totara Sawmilling Company (Limited)	..	Taringamutu ..	„	5 „ * ..	„ ..	180 0 0	330 10 9	13,458 8 6	13,788 19 3
1113	R. 03/4153 ..	Jan 1, 1909	Gardner Bros. and Parker ..	..	New Lynn ..	„	5 „ * ..	†	Repairs, £14/13/	24 14 4	3,054 15 1	3,079 9 5
1125	R. 03/1660 ..	April 1, 1909	Taupo Totara Timber Company ..	..	Putaruru ..	„	5 „ * ..	Premium ..	16 0 0	..	6,960 18 5	6,960 18 5
1139	R. 08/2805 ..	Nov. 1, 1908	New Zealand Loan and Mercantile Agency Company (Limited)	..	Otahuhu ..	Grantees	10 „ * ..	„ ..	1,202 2 6 Rental, £25	6,818 15 2	743 15 1	7,562 10 3
1161	R. 99/3007 ..	June 1, 1909	Taupiri Coal-mines (Limited) ..	..	Huntly ..		5 „ * ..	†	Repairs, £2/2/3	328 5 8	30,352 5 6	30,680 11 2
1163	R. 04/945 ..	June 1, 1909	New Zealand Brick, Tile, and Pottery Company (Limited)	..	New Lynn ..	„	5 „ * ..	†	Repairs, £5/10	..	2,273 9 9	2,273 9 9
1171	R. 04/2378 ..	June 1, 1909	Auckland Veneer and Timber Company (Limited)	..	Onehunga ..	„	10 „ * ..	†	Rental, £25 Rep'rs, £9/8/11	5,744 9 2	89 17 3	5,834 6 5
1190	R. 02/2630 ..	Oct. 1, 1909	Wilson's Portland Cement Company (Limited)	..	Te Kuiti ..	„	5 „ * ..	†	Rental, £12	..	1,193 17 2	1,193 17 2
1205	R. 99/1601 ..	Jan. 1, 1910	R. and W. Hellaby (Limited) ..	..	Westfield ..	„	10 „ * ..	Premium ..	60 10 2 Rental, £25	516 8 5	1,031 3 3	1,547 11 8
1207	R. 00/107 ..	Jan. 1, 1910	Kempthorne, Prosser, and Co.'s New Zealand Drug Company (Limited)	..	„ ..	Grantees	10 „ * ..	†	Rep'rs, £80/18/5 Rental, £25	2,691 7 2	9,443 11 3	12,134 18 5
1210	R. 05/867 ..	April 1, 1910	Shaw, Savill, and Albion Company (Limited)	..	Auckland ..	„	5 „ * ..	..	Repairs, £14/9/ Rental, £50	368 11 6	..	368 11 6
1217	R. 04/2105 ..	Nov. 1, 1909	Ellis and Burnand (Limited) and Patate Timber Company (Limited)	..	Manunui ..	Grantees	5 „ * ..	Premium ..	478 10 0	221 14 9	2,309 17 8	2,531 12 5
1219	R. 10/653 ..	Mar. 1, 1910	Kauri Timber Company (Limited) ..	..	Owharoa ..	„	5 „ * ..	„ ..	544 0 0	..	2,299 7 8	2,299 7 8
1229	R. 02/2510 ..	May 1, 1910	Pukuweka Sawmills (Limited) ..	..	Matapuna ..	„	5 „ * ..	..	..	183 13 1	6,647 16 8	6,831 9 9
1233	R. 98/3564 ..	Aug. 1, 1910	Auckland Farmers' Freezing Company (Limited)	..	Auckland ..	„	3 „ * ..	†	Rental, £50	2,107 13 4	480 7 11	2,588 1 3
1242	R. 04/3883 ..	Mar. 1, 1910	Drury Fireclay, Brick, and Potteries (Limited)	..	Drury	„	5 „ * ..	†	Repairs, £33 12s. 2d.	70 15 3	202 6 8	273 1 11
1243	R. 04/1368 ..	Oct. 1, 1910	Leyland O'Brien Timber Company (Limited)	..	Auckland ..	„	5 „ * ..	†	Rep'rs, £11/15/3 Rental, £50	2,642 18 9	..	2,642 18 9
1246	R. 00/990 ..	Feb. 1, 1910	Union Oil, Soap, and Candle Company (Limited)	..	Westfield ..	„	10 „ * ..	†	Repairs, £9 19s. Rental, £25	694 2 9	707 13 3	1,401 16 0
1249	R. 10/349 ..	Oct. 1, 1910	J. J. Craig (Limited)	..	Mount Eden ..	Grantees	10 „ * ..	Premium ..	345 0 0 Rental, £25	1,550 10 0	18 3 6	1,568 13 6
1261	R. 00/668 ..	July 1, 1910	New Zealand Loan and Mercantile Agency Company (Limited)	..	Hamilton ..	„	10 „ * ..	†	Rental, £25	144 14 9	61 18 5	206 13 2
221	R. 98/365 ..	Dec. 13, 1880	Gear Meat Preserving and Freezing Company (Limited)	6 37	Petone ..	Grantees	Undefined	Premium ..	117 19 11 Rental, £25	1,226 3 8	4,273 16 10	5,500 0 6
868	R. 96/3827 .	Nov. 1, 1903	Nelson Bros. (Limited)	..	Tomoana ..	„	10 years* ..	†	Rental, £25	2,386 5 7	3,578 13 9	5,964 19 4
882	R. 03/4089 ..	Mar. 1, 1904	Union Timber, Sash, and Door Company (Limited)	88 36	Palmerston North	„	10 „ * ..	Premium ..	121 0 0 Rental, £25	814 1 2	66 14 11	880 16 1
883	R. 04/291 ..	Mar. 1, 1904	William Cook	88 36	„	„	10 „ * ..	„ ..	121 0 0 Rental, £25	892 3 0	398 9 0	1,290 12 0
896	R. 04/955 ..	July 1, 1904	The West Coast Steamship and Trading Company	..	„	„	10 „ * ..	„ ..	90 0 0 Rental, £25	33 7 3	1 1 8	34 8 11
922	R. 04/1516 ..	Nov. 1, 1904	Thomas Borthwick and Sons ..	..	Pakipaki ..	„	10 „ * ..	„ ..	1,116 0 0 Rental, £25	2,552 12 8	2,096 19 4	4,649 12 0

* Three months' notice. † Siding originally laid under old agreement.

RETURN No. 24—*continued.*

PARTICULARS of Private-siding Traffic, showing Value of Traffic done during Twelve Months ending 31st March, 1913—*continued.*

Hd. Office Reg. No.	Papers.	Date of Grant	Present Holder	Position	Nearest Station.	By whom paid for.	Term of Grant.	Amount of Traffic guaranteed per Annum.	Liquidated Damages or Premium.	Value of the Traffic through the Siding during the Year ending 31st March, 1913.		
										In.	Out.	Total.
			NORTH ISLAND MAIN LINE AND BRANCHES—*continued.*									
				M. ch.					£ s. d.	£ s. d.	£ s. d.	£ s. d.
924	R. 03/4058 ..	Nov. 1, 1904	Manawatu Racing Club	..	Awapuni ..	Grantees	10 years* ..	Premium ..	487 0 0	..	..	..
938	R. 04/2133 ..	Nov. 18, 1904	The Manawatu Timber Company (Limited)	37 69	Utiku	„	10 „ * ..	„ ..	204 4 6	10 15 2	1 15 9	12 10 11
965	R. 05/2546 ..	Oct. 1, 1905	De Pelichet McLeod Company ..	..	Hastings ..	Grantee	10 * ..	„ ..	170 0 0 Rental, £25	572 1 9	78 16 7	650 18 4
973	R. 96/114 ..	Jan. 1, 1906	Robert Holt	111 79	Napier ..	Govt. ..	10 „ * ..	†	Rental, £50	3,326 3 8	..	3,326 3 8
1002	R. 03/951 ..	June 1, 1906	Wellington Meat Export Company (Limited)	..	Ngahauranga ..	Grantees	10 „ * ..	†	Rental, £25	16,903 17 1	3,161 2 11	20,065 0 0
1014	R. 01/2396 ..	Oct. 1, 1906	Henry Brown and Co.	..	Morley Street ..	„	10 „ * ..	Premium ..	156 0 0 Rental, £25	166 3 9	238 8 11	404 12 8
1018	R. 06/2769 ..	Feb. 1, 1907	Department of Mines	..	Wanganui ..	„	10 „ * ..	„	135 0 0 Rental, £25	47 15 11	430 12 10	478 8 9
1022	R. 06/3785 ..	Jan. 1, 1907	R. Wilson and Co.	..	Marton ..	„	10 „ * ..	„ ..	185 0 0 Rental, £25	283 5 1	219 9 6	502 14 7
1034	R. 02/3212 ..	Mar. 26, 1907	Wellington Meat Export Company (Limited)	..	Waingawa ..	„	10 „ * ..	„ ..	3 10 0 Rental, £25	51 2 0	2,396 13 8	2,447 15 8
1046	R. 07/1141 ..	Oct. 1 1907	New Zealand Shipping Company (Limited)	..	Foxton ..	„	10 „ * ..	„ ..	94 0 0 Rental, £25	973 11 0	410 8 11	1,383 19 11
1069	R. 97/3534 ..	Mar. 1, 1908	Levin and Co.	..	Masterton ..	Govt. and grantees	10 „ * ..	†	Rental, £25	992 0 1	1,463 6 3	2,455 6 4
1077	R. 02/2937 ..	May 1, 1908	Wairarapa Farmers' Co-operative Association	..	„ ..	Grantees	10 „ * ..	Premium ..	152 0 0 Rental, £25	59 15 4	127 0 9	186 16 1
1081	R. 00/2784 ..	June 1, 1908	Mauriceville Lime Company ..	..	Mauriceville ..	„	5 * ..	„ ..	237 5 6	87 11 2	364 3 3	451 14 5
1082	R. 03/2618 ..	Sept. 1, 1908	A. Quinlan	93 36	Hukanui ..	„	5 „ * ..	†	..	..	108 0 2	108 0 2
1087	R. 98/3331 ..	Oct. 1, 1908	W. G. Bassett	2 11	Wanganui ..	„	10 „ * ..	†	Rental, £25	29 13 7	2,794 13 2	2,824 6 9
1094	R. 98/3766 ..	Jan. 1, 1909	Dalgety and Co.	..	Port Ahuriri ..	„	10 „ * ..	..	Rental, £25	1,008 14 1	46 2 5	1,054 16 6
1095	R. 06/2689 ..	Dec. 1, 1908	G. Gardner and Sons	250 48	Hihitahi ..	„	5 „ * ..	Premium ..	1,040 0 0	2,288 2 8	14 6 9	2,302 9 5
1096	R. 08/3485 ..	Jan. 1, 1909	W. Booth and Co.	247 10	„ ..	„	5 „ * ..	„ ..	473 0 0	2,108 18 3	45 9 0	2,154 7 3
1100	R. 08/3724 ..	Jan. 1, 1909	Geo. Syme	..	Tangiwai ..	„	5 „ * ..	„ ..	306 0 0	1,873 13 3	85 1 7	1,958 14 10
1101	R. 09/262 ..	Jan. 1, 1909	Quinn Bros.	..	Hihitahi ..	„	5 „ * ..	„ ..	440 0 0	2,184 5 9	109 5 3	2,293 11 0
1103	R. 05/3440 ..	Feb. 1, 1909	N. King	..	New Plymouth ..	„	10 „ * ..	..	Rental, £25	282 9 10	330 7 3	612 17 1
1110	R. 08/187 ..	Jan. 1, 1909	Masterton Borough Council ..	..	Masterton ..	„	5 „ * ..	Premium ..	470 0 0	1,128 16 3	91 12 8	1,220 8 11
1117	R. 99/1984 ..	May 1, 1909	Wanganui Sash and Door Company (Limited)	..	Wanganui .	„	5 „ * ..	Repairs ..	23 18 6 Rental, £25	66 6 1	4,590 8 11	4,656 15 0
1142	R. 09/1892 ..	April 1, 1909	National Mortgage and Agency Company of New Zealand (Limited)	..	Longburn ..	„	10 „ * ..	†	Rental, £25	482 4 11	3,162 12 10	3,644 17 9
1151	R. 01/2230 ..	May 1, 1909	Henry Carlson	..	Pukehou ..	„	5 „ * ..	†	..	37 11 8	..	37 11 8
1160	R. 98/3250 ..	May 1, 1909	Department of Lands	..	Piripiri ..	„	5 „ * ..	†	Repairs, £10	62 6 0	215 5 0	277 11 0
1165	R. 97/2271 ..	Aug. 1, 1909	George Bartholomew Company (Limited)	..	Feilding ..	„	10 „ * ..	†	Rental, £25	62 2 5	1,786 4 10	1,848 7 3
1174	R. 12/2589 ..	Oct. 1, 1909	Manawatu County Council ..	..	Himatangi ..	„	5 „ * ..	†	..	..	..	..
1177	R. 98/2734 ..	Feb. 1, 1909	C. N. Clausen	..	Palmerston North	„	10 „ * ..	†	Rental, £25	2,648 11 7	79 10 8	2,728 2 3

1188	R. 09/3045 ..	July 1, 1909	New Zealand Powell Wood Process Company (Limited)	..	Rangataua ..	Grantees	5 „ * ..	Premium ..	61 0 0	3,492 13 11	763 14 11	4,256 8 10
1196	R. 04/3525 ..	Jan. 1, 1910	Rangitikei County Council ..	..	Ohingaiti ..	†	5 „ * ..	†	..	1,528 13 4	..	1,528 13 4
1199	R. 99/854 ..	Jan. 1, 1910	Thos. Borthwick and Sons (Australasia, Limited)	..	Waitara ..	†	10 „ * ..	†	Repairs, £6 1s. Rental, £25	87 3 6	1,362 18 10	1,450 2 4
1200	R. 00/1180 ..	Jan. 1, 1910	Williams and Kettle (Limited) ..	..	Port Ahuriri ..	†	10 „ * ..	†	Rental, £25	2,549 16 8	286 17 7	2,836 14 3
1202	R. 04/1256 ..	Oct. 28, 1909	H. D. Bennett	..	Winiata ..	†	5 „ * ..	†	..	459 2 8	11 1 4	470 4 0
1220	R. 08/608 ..	Oct. 1, 1909	Perham, Larsen, and Co. (Limited)	..	Rangataua ..	Grantees	10 „ * ..	Premium ..	345 0 0	6,482 9 2	112 6 10	6,594 16 0
1228	R. 00/1192 ..	May 1, 1910	Robert Holt and Sons	..	Hastings ..	†	10 „ * ..	†	Repairs, £9 Rental, £25	2,448 15 3	88 9 5	2,537 4 8
1232	R. 10/195 ..	April 1, 1910	Wellington Farmers Meat Company (Limited)	..	Waingawa ..	Grantees	10 „ * ..	Premium ..	730 0 0 Rental, £50	3,489 18 4	6,211 18 0	9,701 16 4
1237	R. 00/2261 ..	April 1, 1910	William Booth and Co. (Limited) ..	..	Carterton ..	†	5 „ * ..	†	..	1,421 9 6	89 3 0	1,510 12 6
1244	R. 10/1969 ..	July 1, 1910	New Zealand Post and Telegraph Department	..	Wellington ..	Grantees	10 „ * ..	Premium ..	240 0 0	47 13 7	1,102 2 8	1,149 16 3
1253	R. 06/1474 ..	July 1, 1910	West Coast Steam Ship and Trading Company (Limited)	..	Foxton ..	„	10 „ * ..	„ ..	102 0 0 Rental, £25	248 10 6	50 10 0	299 0 6
1257	R. 98/3937 ..	Oct. 1, 1910	James Garnett	..	Hastings ..	†	10 „ * ..	†	Repairs, £2 Rental, £25	1,266 12 7	8 9 4	1,275 1 11
1262	R. 09/4760 ..	Nov. 1, 1911	Egmont Box Company (Limited) ..	..	Winiata ..	Grantees	10 „ * ..	Premium ..	610 0 0 Rental, £50	5,040 2 4	419 19 10	5,460 2 2
1269	R. 01/299 ..	April 1, 1911	The Woodville Bacon Company (Limited)	..	Woodville ..	†	10 „ * ..	†	Repairs, £25 Rental, £25	911 14 8	1,494 8 7	2,406 3 3
1276	R. 01/182 ..	June 1, 1911	Silverstream Brick and Tile Company	..	Silverstream ..	†	5 „ * ..	†	..	356 18 7	1,191 17 7	1,548 16 2
1278	R. 99/2633 ..	April 1, 1911	Henry Brown and Co.	..	Inglewood ..	†	5 „ * ..	†	..	80 1 9	355 8 4	435 10 1
1283	R. 10/5446 ..	June 1, 1911	August Carlson	..	Owhango ..	Grantees	5 „ * ..	Premium ..	260 0 0	93 1 8	2,637 13 11	2,730 15 7
1284	R. 06/842 ..	June 1, 1911	Coates Limited	..	Huntly ..	†	5 „ * ..	†	Repairs, £2 16s.	60 0 0	363 4	423 4 4
1285	R. 09/803 ..	Aug. 1, 1911	Pakipaki Brick and Lime Company (Limited)	94 59	Pakipaki ..	Grantees	10 „ * ..	Premium ..	500 0 0 Rental, £50	137 6 7	235 9	372 16 2
1287	R. 99/2390 ..	Sept. 30, 1911	James McGill	..	Palmerston North	†	10 „ * ..	†	Rental, £25	2,083 3 2	389 0 8	2,472 3 10
1288	R. 01/2827 ..	Oct. 1, 1911	Napier Gas Company (Limited) ..	..	Hastings ..	†	5 „ * ..	†	Repairs, £33	1,436 2 9	13 18 1	1,450 0 10
1289	R. 05/3657 ..	July 1, 1911	Henry Alexander	46 79	Mataroa ..	†	5 „ * ..	†	Repairs, £8 9s.	340 16 5	59 7 4	400 3 9
1293	R. 04/3856 ..	July 1, 1911	John Wilson	..	Te Kuiti ..	†	5 „ * ..	†	Repairs, £6 12s.	29 18 4	1,313 14 2	1,343 12 6
1295	R. 02/1544 ..	Aug. 1, 1911	Waikopiro Timber Company (Limited)	..	Rakaiatai ..	†	5 „ * ..	†	..	39 2 7	483 3 8	522 6 3
1296	R. 00/1143 ..	Sept. 30, 1911	Taranaki Producers' Freezing-works Company (Limited)	..	Moturoa ..	Grantees	10 „ * ..	Premium ..	248 0 0 Rental, £25	1,491 9 11	2,657 6 8	4,148 16 7
1297	R. 99/2453 ..	Oct. 1, 1911	Egmont Box Company (Limited) ..	..	Eltham ..	„	10 „ * ..	„ ..	55 0 0 Rental, £25	559 1 8	4,786 18 2	5,345 19 10
1304	R. 00/2203 ..	Nov. 1, 1911	Taupiri South Coal Company (Limited)	..	Huntly	†	1 „ * ..	†	Repairs, £3 14s. 9d.	..	..	..
1305	R. 11/5124 ..	Jan. 1, 1912	W. Dimock and Co.	..	Westfield ..	Grantees	10 „ * ..	Premium ..	838 0 0 Rental, £25	218 0 11	223 3 0	441 3 11
1308	R. 09/4442 ..	Mar. 1, 1912	Waikato Farmers' Co-operative Bacon Company (Limited)	..	Frankton ..	„	10 „ * ..	„ ..	146 10 0 Rental, £25	405 17 4	5 13 4	411 10 8
1309	R. 10/5454 ..	Sept. 1, 1912	A. Hatrick and Co. (Limited) ..	..	Waitara ..	„	10 „ * ..	„ ..	84 0 0 Rental, £25	286 16 1	261 0 8	547 16 9
1314	R. 11/5277 ..	Mar. 1, 1912	Wairarapa Farmers' Co-operative Association	..	Carterton ..	„	10 „ * ..	„ ..	220 0 0 Rental, £25	25 10 11	31 7 9	56 18 8

* Three months' notice. † Siding originally laid under old agreement.

RETURN No. 24—*continued.*

PARTICULARS of PRIVATE-SIDING TRAFFIC, showing Value of Traffic done during Twelve Months ending 31st March, 1913—*continued.*

Hd. Office Reg. No.	Papers.	Date of Grant.	Present Holder.	Position.	Nearest Station.	By whom paid for.	Term of Grant.	Amount of Traffic guaranteed per Annum.	Liquidated Damages or Premium.	Value of the Traffic through the Siding during the Year ending 31st March, 1913. In.	Out.	Total.
			NORTH ISLAND MAIN LINE AND BRANCHES—*continued.*									
				M. ch.					£ s. d.	£ s. d.	£ s. d.	£ s. d.
1318	R. 07/2777 ..	Mar. 1, 1912	Napier Gas Company (Limited) ..	..	Napier	Grantees	10 years* ..	Premium..	160 0 0 Rental, £50	795 6 10	253 3 0	1,048 9 10
1323	R. 07/1584 ..	May 1, 1912	Selwyn Timber Company (Limited)	..	Putaruru ..	†	5 „ * ..	†	..	114 15 1	1,296 8 5	1,411 3 6
1324	R. 10/3879 ..	Dec. 31, 1911	Feilding Sash and Door Company (Limited)	..	Ohakune ..	Grantees	5 „ * ..	Premium..	300 0 0	6,234 3 6	49 19 2	6,284 2 8
1326	R. 11/5571 ..	April 1, 1912	B. L. Knight	..	Raurimu ..	„	5 „ * ..	„ ..	190 0 0	125 2 3	938 12 11	1,063 15 2
1329	R. 99/1294 ..	May 1, 1912	J. J. Craig (Limited)	..	Auckland ..	†	2 „ * ..	„ ..	100 0 0	7,326 7 8	119 2 7	7,445 10 3
1331	R. 07/895 ..	July 1, 1912	Andrews and Gosse	11 28	Belmont ..	†	5 „ * ..	†	Repairs, £3/5/-	21 15 11	1,103 19 11	1,125 15 10
1332	R. 09/1157 ..	April 1, 1912	Public Works Department ..	..	Mount Eden ..	Grantees	5 „ * ..	..	..	18 11 6	76 12 9	95 4 3
1334	R. 12/3243 ..	April 1, 1912	Public Works Department ..	64 56	Wayby	„	5 „ * ..	..	..	..	..	..
1337	R. 01/886 ..	Nov. 1, 1911	West Coast Refrigerating Company (Limited)	..	Patea ..	†	5 „ * ..	†	Repairs, £6/10/-	868 18 9	3,421 18 5	4,290 17 2
1339	R. 02/2478 ..	Sept. 1, 1912	Wanganui Dairy Company (Limited)	..	Aramoho ..	†	5 „ * ..	†	Rep'rs, 12s. 8d. Rental, £25	112 14 6	164 4 2	276 18 8
1341	R. 00/1840 ..	April 1, 1912	Department of Justice	..	Mount Eden ..	†	2⅙ „ * ..	†	..	96 3 3	59 12 5	155 15 8
1342	R. 00/1840 ..	April 1, 1912	Post and Telegraph Department ..	..	„ ..	†	2⅙ „ * ..	†	..	5 16 0	28 12 3	34 8 3
1343	R. 00/1840 ..	April 1, 1912	Colonial Ammunition Company (Limited)	..	„ ..	†	2⅙ „ * ..	†	..	190 14 6	..	190 14 6
1346	R. 03/3714 ..	July 1, 1912	Winstone Limited	..	„ ..	†	10 „ * ..	†	Rental, £25	3,095 10 0	78 11 6	3,174 1 6
1347	R. 07/2501 ..	Aug. 1, 1912	Belmont Quarry Company (Limited)	..	Belmont ..	†	5 „ * ..	†	Repairs, £2/4/-	4 5 7	925 6 2	929 11 9
1348	R. 07/618 ..	Sept. 1, 1912	Farmers' Co-operative Auctioneering Company (Limited)	..	Matamata ..	Grantees	10 „ * ..	Premium..	161 0 0 Rental, £25	134 6 8	2 0 2	136 6 10
1351	R. 03/600 ..	July 1, 1912	Winstone Limited	..	Auckland ..	†	1 „ * ..	†	Rental, £50	4,260 0 8	361 17 4	4,621 18 0
1357	R. 02/3099 ..	Sept. 1, 1912	Williams and Kettle (Limited) ..	..	Hastings ..	†	5 „ * ..	†	Rental, £25	1,387 19 0	185 10 8	1,573 9 8
1360	R. 12/3433 ..	Oct. 1, 1912	Te Aroha Quarry Company ..	..	Tirohia ..	Grantees	5 „ * ..	Premium..	384 0 0	5 1 10	85 18 2	91 0 0
1361	R. 03/3698 ..	Oct. 1, 1912	Gilmer and Maguire	9 55	Belmont ..	„	5 „ * ..	„ ..	498 0 0	62 18 7	91 15 2	154 13 9
1362	R. 12/2857 ..	Oct. 1, 1912	Eltham Co-operative Dairy Factory Company (Limited)	..	Eltham ..	„	10 „ * ..	„ ..	600 0 0	326 3 6	131 15 6	457 19 0
1363	R. 12/4080 ..	July 1, 1912	Public Works Department ..	..	Wellington ..	Govt. ..	5 „ * ..	..	..	31 17 3	1,054 7 6	1,086 4 9
1368	R. 00/613 ..	Nov. 1, 1912	Auckland Brick and Pottery Company	..	New Lynn ..	†	5 „ * ..	†	Repairs, £86	..	2,062 12 0	2,062 12 0
1369	R. 02/670 ..	Oct. 1, 1912	United Coal Company (Limited) ..	44 33	Whangamarino ..	†	5 „ * ..	†	Repairs, £37 12s. 7d.	..	3,749 10 9	3,749 10 9
1372	R. 11/4903 ..	Nov. 1, 1912	Wellington Woollen Manufacturing Company (Limited)	..	Petone	Grantees	10 „ * ..	Premium..	129 0 0 Rental, £25	208 4 10	..	208 4 10
1373	R. 12/4815 ..	Dec. 1, 1912	Farmers' Co-operative Auctioneering Company (Limited)	..	Frankton ..	„	10 „ * ..	„ ..	151 11 6 Rental, £25	..	..	..
1376	R. 12/4814 ..	Dec. 1, 1912	Goodfellow Limited	..	„ ..	„	10 „ * ..	„ ..	151 11 6 Rental, £25	..	..	..
1382	R. 10/5535 ..	Jan. 1, 1913	May Morn Estates (New Zealand) (Limited)	23 10	Mangaroa ..	„	10 „ * ..	„ ..	663 0 0 Rental, £50	227 16 11	..	227 16 11
1384	R. 10/3878 ..	Nov. 1, 1912	J. N. Williams	..	Hastings ..	„	10 „ * ..	„ ..	340 0 0 Rental, £25	..	..	..

1385	R. 04/1751 ..	Feb. 17, 1912	Waitemata County Council, Kaipara Co-operative Dairy Factory Company (Limited), Durand and Trengrove	..	Helensville South	†	10 ″ * ..	†	Repairs, £61 Rental, £25	266 19 8	48 3 10	315 3 6
1386	R. 00/2214 ..	Jan. 1, 1913	Kendrick Bros.	..	Aramoho ..	†	5 ″ * ..	†	..	194 9 8	71 10 0	265 19 8
1387	R. 12/1096 ..	June 1, 1913	Levin and Co. (Limited).. ..	..	Kaiwarra ..	Grantees	10 ″ * ..	Premium..	352 0 0 Rental, £50	..	..	..
1388	R. 12/2555 ..	Jan. 1, 1913	Hawke's Bay Farmers' Co-operative Association (Limited)	..	Waipukurau ..	″	10 ″ * ..	″ ..	309 0 0 Rental, £25	4 10 6	40 17 6	45 8 0
1393	R. 12/3461 ..	Jan. 1, 1913	Ellis and Burnand	..	Ongarue ..	″	5 ″ * ..	″ ..	574 0 0	..	..	..
1395	R. 07/2868 ..	Jan. 1, 1913	Rangataua Timber Company (Limited)	..	Rangataua ..	†	5 ″ * ..	†	Repairs, £22	2,839 4 0	14 5 1	2,853 9 1
1398	R. 01/1877 ..	Jan. 1, 1913	G. H. Stubbs	..	Waitara ..	†	1 ″ * ..	†	Rental, £25	312 6 7	199 12 9	511 19 4
1399	R. 02/1854 ..	April 1, 1913	Tiratu Sawmilling Company ..	..	Mangatera ..	†	5 ″ * ..	†	Repairs, £21/12/-	46 5 11	1,194 11 11	1,240 17 10

SOUTH ISLAND MAIN LINE AND BRANCHES.

..	..	..	J. Mill and Co.	..	Oamaru ..	Govt. ..	..	..	..	663 9 2	418 4 10	1,081 14 0
3	R. 96/1630 ..	Dec. 28, 1870	Richard Allen	1 17	Riccarton ..	Grantee	Indefinite	..	..	1,021 1 6	2,185 14 1	3,206 15 7
13	R. 98/4310 ..	Dec. 18, 1874	Oamaru Harbour Board	157 77	Oamaru ..	″ ..	Undefined	..	..	3,571 18 11	1,731 7 4	5,303 6 3
20	R. 96/1984 ..	Dec. 11, 1875	Richard Evans	1 52	Wilson's Siding ..	Grantee	Indefinite	..	..	87 1 7	127 19 1	215 0 8
32	R. 99/3100 ..	April 7, 1876	D. C. Turnbull and Co.	105 54	Timaru ..	Govt. ..	″	..	..	643 0 11	599 3 8	1,242 4 7
33	R. 00/945 ..	April 22, 1876	J. Deans	8 75	Glentunnel ..	″ ..	″	..	..	49 4 10	1,786 11 10	1,835 16 8
37	R. 02/641 ..	July 18, 1876	Clark Bros.	166 27	Maheno ..	″ ..	Undefined	..	..	497 12 9	1,631 11 0	2,129 3 9
120	R. 00/2193 ..	Jan. 23, 1878	Oamaru Harbour Board ..	157 65 157 65	Oamaru (1st sidg.) ″ (2nd ″)	″ ..	Indefinite	Premium..	300 0 0 Rental, £50	1,864 18 6	1,300 10 7	3,165 9 1
178	R. 89/2248 ..	—— 1878	Mosgiel Woollen-factory Company	0 73	Mosgiel Township	″ ..	″	..	..	332 10 9	70 1 5	402 12 2
258	R. 00/473 ..	Jan. 10, 1882	Wigram Bros.	10 71	South Malvern ..	″ ..	″	..	..	..	31 3 11	31 3 11
816	R. 92/806 ..	Mar. 1, 1902	N.Z. Loan and Mercantile Agency Company (Limited)	..	Christchurch ..	Grantees	10 years* ..	..	Rental, £50	1,498 12 10	729 16 9	2,228 9 7
835	R. 03/477 ..	Dec. 1, 1902	Donald Reid and Co. (Limited) ..	..	Dunedin ..	″	10 ″ * ..	†	Rental, £50	3,962 4 10	579 10 5	4,541 15 3
844	R. 93/1075 ..	Feb. 1, 1903	N.Z. Loan and Mercantile Agency Company (Limited)	..	Gore	″	10 ″ * ..	†	Repairs, £2 15s. Rental, £25	224 6 4	268 2 6	492 8 10
845	R. 03/1083 ..	May 1, 1903	A. P. Tutton	..	Rangiora ..	″	10 ″ * ..	Premium..	100 0 0 Rental, £25	53 6 10	64 17 1	118 3 11
849	R. 93/2140 ..	May 1, 1903	Nichol Bros.	..	Bluff ..	″	10 ″ * ..	†	Rental, £50	1,782 0 11	1,837 5 2	3,619 6 1
853	R. 99/1940 ..	May 1, 1903	Lyttelton Borough Council (Shaw, Savill, and Albion Company, Kaye and Carter, tenants)	..	Lyttelton ..	″	10 ″ * ..	†	Rental, £50	4,878 3 5	1,716 3 10	6,594 7 3
854	R. 02/3125 ..	June 1, 1903	Vacuum Oil Company	..	Christchurch ..	Govt. ..	10 ″ * ..	..	Rental, £50	1,759 15 4	199 9 5	1,959 4 9
856	R. 03/1919 ..	June 1, 1903	Pyne and Co.	..	″ ..	Grantees	10 ″ * ..	Premium ..	350 0 0 Rental, £50	2,496 5 6	1,616 8 7	4,112 14 1
860	R. 03/2316 ..	Aug. 1, 1903	Canterbury Frozen Meat and Dairy-produce Export Company (Ltd.)	113 12	Pareora ..	″	10 ″ * ..	″ ..	615 0 0 Rental, £50	4,883 9 3	2,574 12 10	7,458 2 1
881	R. 97/2835 ..	Feb. 1, 1904	J. G. Ward	..	Bluff ..	″	10 ″ * ..	†	Rental, £50	4,534 9 8	985 3 6	5,519 13 2
888	R. 03/4076 ..	June 1, 1904	North Canterbury Co-operative Stores Company (Limited)	..	Rangiora ..	″	10 ″ * ..	Premium..	235 0 0 Rental, £25	356 17 6	125 18 6	482 16 0
901	R. 04/1850 ..	July 1, 1904	Christchurch Tramway Board ..	..	Christchurch ..	″	10 ″ * ..	″ ..	500 0 0 Rental, £50	1,825 5 4	6 3 6	1,831 8 10
914	R. 94/3672 ..	Oct. 1, 1904	N.Z. Loan and Mercantile Agency Company (Limited)	..	Dunedin ..	Govt. and grantees	10 ″ * ..	†	Rental, £50	2,066 15 4	634 19 8	2,701 15 0

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* Three months' notice.

† Siding originally laid under old agreement.

RETURN No. 24—*continued.*

PARTICULARS of Private-siding Traffic, showing Value of Traffic done during Twelve Months ending 31st March, 1913—*continued.*

Hd. Office Reg. No.	Papers.	Date of Grant.	Present Holder.	Position.	Nearest Station.	By whom paid for.	Term of Grant.	Amount of Traffic guaranteed per Annum.	Liquidated Damages or Premium.	Value of the Traffic through the Siding during the Year ending 31st March, 1913. In.	Out.	Total.
			SOUTH ISLAND MAIN LINE AND BRANCHES—*continued.*									
				M. ch.					£ s. d.	£ s. d.	£ s. d.	£ s. d.
928	R. 04/2853	Jan. 1, 1905	Thomas Todd and Sons	3 41	West Plains	Grantees	10 years*	Premium	221 14 0 Rental, £50	412 17 4	279 19 4	692 16 8
933	R. 94/3949	Dec. 1, 1904	N.Z. Loan and Mercantile Agency Company (Limited)	..	Invercargill	〃	10 〃 *	†	Rental, £50	670 11 0	608 0 0	1,278 11 0
948	R. 01/2761	Jan. 1, 1905	J. E. Watson and Co. (Limited)	..	Bluff	〃	10 〃 *	†	Rental, £50	541 15 6	1,473 18 3	2,015 13 9
952	R. 95/2127	May 1, 1905	G. McClatchie and Co.	6 9	Christchurch	Govt.	10 〃 *	†	Rental, £50	3,306 2 9	224 2 6	3,530 5 3
964	R. 05/2953	Sept. 1, 1905	Dalgety and Co. (Limited)	..	Timaru	Grantees	10 〃 *	Premium	75 0 0 Rental, £50	876 8 5	401 6 8	1,277 15 1
974	R. 98/111	Jan. 1, 1906	Broad, Small, and Co.	374 46	Invercargill	Govt.	10 〃 *	〃	6 0 0 Rental, £50	211 10 0	43 0 0	254 10 0
979	R. 03/1149	Jan. 1, 1906	J. G. Ward and J. T. Carswell	374 39	〃	Grantees	10 〃 *	〃	12 10 0 Rental, £50	880 0 0	810 10 0	1,690 10 0
982	R. 05/2912	Jan. 1, 1906	New Zealand Farmers' Co-operative Association (Limited)	..	Lake Road	〃	10 〃 *	〃	30 0 0 Rental, £25	99 8 7	856 14 1	956 2 8
994	R. 01/776	May 1, 1906	Fleming and Co.	..	Gore	〃	10 〃 *	†	Rental, £25	1,261 9 10	678 12 9	1,940 2 7
996	R. 06/946	May 1, 1906	N.Z. Govt. Mines Department	..	Christchurch	〃	10 〃 *	Premium	220 0 0 Rental, £50	2,191 7 9	35 10 3	2,226 18 0
1000	R. 96/2443	July 1, 1906	Christchurch Meat Company (Ltd.)	..	Hornby	〃	10 〃 *	†	Rental, £25	141 18 0	129 6 0	271 4 0
1001	R. 96/3013	July 1, 1906	James Macfie and Co. (Limited)	..	Dunedin	〃	10 〃 *	†	Rental, £50	2,925 1 0	12 11 11	2,937 12 11
1015	R. 02/2502	Aug. 1, 1906	William Quinn	121 76	Otaio	Govt. and grantees	10 〃 *	†	Rental, £25	127 12 9	25 12 0	153 4 9
1017	R. 06/3093	Jan. 1, 1907	N.M. and A. Co. of N.Z. (Limited)	..	Invercargill	Grantees	10 〃 *	Premium	12 0 0 Rental, £50	760 10 0	660 15 0	1,421 5 0
1019	R. 98/410	Dec. 1, 1906	Christchurch Meat Company	..	Smithfield	〃	10 〃 *	†	Rental, £25	8,156 4 8	4,818 17 6	12,975 2 2
1028	R. 99/671	Mar. 1, 1907	Bruce Woollen Manufacturing Coy.	..	Milton	Grantees	10 〃 *	..	Rental, £25	292 17 0	28 3 0	321 0 0
1053	R. 97/4377	Oct. 1, 1907	P. McGill (Limited)	271 40	〃	Govt.	10 〃 *	..	Rental, £25	1,266 16 2	1,024 17 8	2,291 13 10
1056	R. 06/3430	Jan. 1, 1908	Westport Coal Company	..	Christchurch	Grantees	10 〃 *	Premium	255 0 0 Rental, £50	1,862 12 9	15 15 7	1,878 8 4
1059	R. 01/600	Jan. 1, 1908	Evans and Co. (Limited)	..	Timaru	Govt.	10 〃 *	..	Rental, £50	1,291 11 11	1,107 19 1	2,399 11 0
1060	R. 98/1147	Jan. 1, 1908	J. Deans	..	Christchurch	〃	10 〃 *	..	Rental, £50	1,434 12 1	233 3 9	1,667 15 10
1064	R. 02/3375	Sept. 1, 1907	Timaru A. and P. Association	103 63	Smithfield	Grantees	10 〃 *	..	..	94 12 6	24 4 8	118 17 2
1066	R. 07/3100	July 1, 1907	N.Z. Loan and Mercantile Agency Company	..	Methven	〃	10 〃 *	Premium	220 0 0 Rental, £25	173 6 3	569 15 1	743 1 4
1070	R. 08/472	Jan. 1, 1908	A. S. Paterson and Co. (Limited)	..	Christchurch	〃	10 〃 *	〃	167 0 0 Rental, £50	241 19 4	1 8 6	243 7 10
1071	R. 06/2609	Feb. 1, 1908	Murray, Roberts, and Co.	..	Dunedin	〃	10 〃 *	..	Rental, £50	1,347 19 8	418 2 0	1,766 1 8
1072	R. 91/4426	Nov. 1, 1907	Timaru Milling Company	..	Timaru	〃	10 〃 *	Premium	25 0 0 Rental, £50	2,005 14 7	1,096 7 1	3,102 1 8
1080	R. 07/3358	July 1, 1908	Dalgety and Co. (Limited)	..	Invercargill	〃	10 〃 *	〃	219 0 0 Rental, £50	641 16 0	390 18 0	1,032 14 0
1086	R. 05/3076	July 1, 1908	Timaru Harbour Board	..	Timaru	〃	10 〃 *	..	..	(Included in No. 1245.)		
1088	R. 04/2833	Sept. 1, 1908	Canterbury Frozen Meat and Dairy Produce Export Company (Ltd.)	..	Fairfield	〃	10 〃 *	..	Rental, £50	2,036 17 2	6,066 12 7	8,103 9 9

1090	R. 98/4223 ..	Oct. 1, 1908	Oamaru T.T. and O.K. Stone Company (Limited)	..	Whitecraig ..	„	5 „ * ..	..	..	11 14 1	346 14 5	358 8 6
1091	R. 06/2890 ..	Oct. 1, 1908	W. Stephens and Co. (Limited) ..	..	Addington ..	„	10 „ * ..	Premium ..	230 0 0 Rental, £25	2,219 11 11	168 3 6	2,387 15 5
1092	R. 99/490 ..	Jan. 1, 1909	N.Z. Loan and Mercantile Agency Company (Limited)	..	Lyttelton ..	„	10 „ * ..	..	Rental, £50	432 7 5	451 9 5	883 16 10
1104	R. 98/4319 ..	Dec. 1, 1908	Palmer and Son	..	Logan's Point ..	Govt. ..	5 „ * ..	..	..	0 9 0	1,571 15 11	1,572 4 11
1105	R. 01/1450 ..	Dec. 18, 1908	N.M. and A. Co. of N.Z. (Limited)	..	Ashburton ..	Grantees	7 „ * ..	..	Rental, £25	553 3 11	690 15 8	1,243 19 7
1108	R. 08/3510 ..	Dec. 1, 1908	I. W. Raymond and Co. (Limited)	..	Te Tua	„	5 „ * ..	Premium ..	230 0 0	3 2 10	701 6 10	704 9 8
1112	R. 03/3479 ..	Oct. 1, 1908	Taieri County Council	..	Mosgiel ..	„	5 „ * ..	„ ..	250 0 0	..	397 6 1	397 6 1
1115	R. 03/3959 ..	April 1, 1909	Freeman's Coal Company ..	..	Fernhill ..	„	5 „ * ..	..	..	40 0 5	1,828 9 9	1,868 10 2
1116	R. 00/478 ..	Feb. 1, 1909	The Canterbury (N.Z.) Seed Company (Limited)	..	Addington ..	„	10 „ * ..	†	Rental, £25	1,298 13 9	741 13 2	2,040 6 11
1118	R. 03/3654 ..	Jan. 1, 1909	Southland Sawmilling Company ..	..	Te Tumutu ..	†	5 „ * ..	†	Repairs, £1	37 16 5	757 6 2	795 2 7
1122	R. 99/2092 ..	May 1, 1909	National Mortgage and Agency Company of New Zealand (Limited)	374 56	Invercargill ..	†	10 „ * ..	†	Rental, £50	280 1 0	94 16 0	374 17 0
1123	R. 99/2422 ..	May 1, 1909	Friedlander Bros. (Limited) ..	..	Ashburton ..	†	10 „ * ..	†	Rental, £25	438 10 3	898 1 1	1,336 11 4
1124	R. 03/2053 ..	May 1, 1909	Friedlander Bros. (Limited) ..	58 73	„ ..	†	10 „ * ..	†	Rental, £25			
1127	R. 99/1832 ..	May 1, 1909	Bedford Mills Company (Limited)	..	Timaru ..	†	10 „ * ..	†	Repairs, £22 Rental, £50	446 4 0	581 13 5	1,027 17 5
1128	R. 09/1233 ..	April 4, 1909	H. Matson and Co. (Limited) ..	..	Addington ..	Grantees	10 „ * ..	Premium ..	266 0 0 Rental, £25	1,432 4 8	411 12 3	1,843 16 11
1129	R. 99/1738 ..	May 1, 1909	Canterbury (N.Z.) Seed Company (Limited)	..	Heathcote ..	„	10 „ * ..	„ ..	44 5 0 Rental, £25	656 10 6	360 2 10	1,016 13 4
1131	R. 05/2759 ..	May 1, 1909	William Goss	..	Christchurch ..	†	10 „ * ..	†	Rep'rs, £32/13/6 Rental, £50	1,107 1 5	462 19 0	1,570 0 5
1132	R. 03/147 ..	April 1, 1909	N.Z. Coal and Oil Company (Limited)	..	Orepuki ..	†	5 „ * ..	†	Repairs, £3	28 17 0	469 12 8	498 9 8
1133	R. 99/1728 ..	May 1, 1909	Dalgety and Co. (Limited) ..	..	Christchurch ..	†	10 „ * ..	†	Rental, £50	2,496 18 10	1,670 5 4	4,167 4 2
1134	R. 03/2054 ..	May 1, 1909	Friedlander Bros. (Limited) ..	..	Tinwald ..	†	10 „ * ..	†	Rep'rs, £30/10/ Rental, £25	6 13 8	2,069 17 8	2,076 11 4
1135	R. 99/2208 ..	Jan. 1, 1909	Christchurch Gas, Coal, and Coke Company (Limited)	..	Christchurch ..	Grantees	10 „ * ..	Premium ..	110 0 0 Rental, £50	4,371 3 0	309 2 4	4,680 5 4
1136	R. 99/2427 ..	May 1, 1909	Canterbury Roller Flour-mills Company	..	Gore	†	1 „ * ..	†	Rental, £25	112 10 11	598 2 6	710 13 5
1138	R. 98/3247 ..	April 1, 1909	Friedlander Bros. (Limited) ..	..	Lyndhurst ..	†	10 „ * ..	Premium ..	51 10 0 Rental, £25	..	1,064 3 10	1,064 3 10
1140	R. 99/2174 ..	May 1, 1909	Fleming and Co. (Limited) ..	..	Elles Road ..	†	10 „ * ..	†	Repairs, £2 Rental, £50	912 18 0	700 8 6	1,613 6 6
1141	R. 99/263 ..	Feb. 1, 1909	John Borgfeldt	..	Papanui ..	..	5 „ * ..	†	Repairs, £56 Rental, £25	4 15 0	190 1 4	194 16 4
1143	R. 99/1935 ..	May 1, 1909	Thomas Newton Pratt	..	Christchurch ..	†	10 „ * ..	†	Rental, £50	2,103 11 11	550 15 1	2,654 7 0
1144	R. 99/2066 ..	June 1, 1909	National Mortgage and Agency Company of New Zealand (Limited)	..	Dunedin ..	†	10 „ * ..	†	Rental, £50	3,130 13 9	682 6 2	3,812 19 11
1145	R. 99/1120 ..	July 1, 1909	Wright, Stephenson, and Co. (Limited)	..	Invercargill ..	†	10 „ * ..	†	Rental, £50	1,106 11 0	820 16 0	1,927 7 0
1146	R. 09/358 ..	July 1, 1909	Wm. Hugh Paterson	..	Willowbank ..	Grantee	5 „ * ..	Premium ..	155 0 0	2 6 2	..	2 6 2
1147	R. 99/1967 ..	June 1, 1909	Crown Milling Company (Limited)	..	Dunedin ..	†	10 „ * ..	†	Rental, £50	1,332 2 2	353 19 2	1,686 1 4
1148	R. 99/1968 ..	Aug. 1, 1909	Wm. Scott and Co.	..	Southbridge ..	†	10 „ * ..	†	Rental, £25	413 13 5	237 14 3	651 7 8
1150	R. 97/2821 ..	Aug. 1, 1909	Dalgety and Co. (Limited) ..	..	Dunedin ..	†	10 „ * ..	†	Rental, £50	4,573 6 4	1,075 11 3	5,648 17 7

* Three months' notice.

† Siding originally laid under old agreement.

RETURN No. 24—*continued.*

PARTICULARS of PRIVATE-SIDING TRAFFIC, showing Value of Traffic done during Twelve Months ending 31st March, 1913—*continued.*

Hd. Office Reg. No.	Papers.	Date of Grant.	Present Holder.	Position.	Nearest Station.	By whom paid for.	Term of Grant.	Amount of Traffic guaranteed per Annum.	Liquidated Damages or Premium.	Value of the Traffic through the Siding during the Year ending 31st March, 1913.		
										In.	Out.	Total.
			SOUTH ISLAND MAIN LINE AND BRANCHES—*continued.*									
				M. ch.					£ s. d.	£ s. d.	£ s. d.	£ s. d.
1153	R. 99/2313 ..	Aug. 1, 1909	Invercargill Corporation	..	Invercargill ..	†	5 years* ..	Repairs ..	6 0 0	360 16 0	18 1 6	378 17 6
1154	R. 07/4774 ..	July 1, 1909	Jarrah Timber Company.. ..	..	Addington ..	†	10 „ * ..	„ ..	Repairs, £81 Rental, £25	501 9 10	0 6 3	501 16 1
1157	R. 99/2537 ..	June 1, 1909	Christchurch Meat Company (Limited)	..	Eveline ..	†	10 „ * ..	†	Rental, £50	524 3 7	1,497 8 1	2,021 11 8
1158	R. 99/2017 ..	Aug. 1, 1909	Oamaru Borough Council ..	..	Oamaru ..	†	5 „ * ..	†	..	131 13 7	236 11 2	368 4 9
1167	R. 08/2000 ..	Aug. 1, 1909	Milburn Lime and Cement Company (Limited)	..	Milburn ..	†	5 „ * ..	†	..	870 14 9	1,013 12 4	1,884 7 1
1169	R. 99/2207 ..	Aug. 1, 1909	Walton Park Coal Company ..	..	Walton Park ..	†	5 „ * ..	†	..	..	234 17 0	234 17 0
1173	R. 03/3161 ..	Oct. 1, 1909	W. Bird and A. M. Swhan ..	..	Otautau ..	†	5 „ * ..	†	Repairs, £1 10s.	..	508 15 3	508 15 3
1176	R. 99/2065 ..	Aug. 1, 1909	William Nicholls	..	Belfast ..	†	10 „ * ..	†	Rental, £25	1,029 6 6	850 6 0	1,879 12 6
1178	R. 99/2218 ..	Aug. 1, 1909	H. O'Kane and Co.	..	Makarewa ..	†	5 „ * ..	†	..	72 8 8	207 6 2	279 14 10
1179	R. 99/2343 ..	Aug. 1, 1909	Smart and Son	..	Hornsby ..	†	5 „ * ..	†	..	31 7 9	774 17 9	806 5 6
1181	R. 99/2042 ..	Oct. 1, 1909	New Zealand Shipping Company (Limited)	..	Bluff ..	†	10 „ * ..	†	Rental, £50	1,747 2 2	387 19 2	2,135 1 4
1182	R. 02/1255 ..	Nov. 1, 1909	Invercargill Corporation	..	Waikiwi ..	†	5 „ * ..	†	Repairs, £2 10s.	244 11 5	96 10 0	341 1 5
1185	R. 99/1719 ..	Aug. 1, 1909	Bowron Bros. Export and Trading Company (Limited)	..	Woolston ..	†	10 „ * ..	†	Rental, £25	1,783 3 3	519 14 5	2,302 17 8
1186	R. 99/2096 ..	Aug. 1, 1909	Lyttelton Borough Council ..	..	„ ..	†	5 „ * ..	†	..	12 3 8	..	12 3 8
1192	R. 99/2406 ..	Aug. 1, 1909	Christchurch Meat Company (Limited)	..	Islington ..	†	10 „ * ..	†	Rental, £25	10,534 4 2	5,990 1 2	16,524 5 4
1193	R. 09/3046 ..	Oct. 1, 1909	James Holland	..	Kaiapoi ..	†	5 „ * ..	†	..	..	134 0 0	134 0 0
1194	R. 99/2416 ..	Nov. 1, 1909	N.Z. Loan and Mercantile Agency Company (Limited)	..	Bluff ..	†	10 „ * ..	†	Repairs, £13 Rental, £50	1,684 4 6	1,565 6 7	3,249 11 1
1197	R. 99/2209 ..	Jan. 1, 1910	John Marshall	..	Centre Bush ..	†	5 „ * ..	†	Repairs, £2 5s.	..	614 0 5	614 0 5
1201	R. 99/2813 ..	Nov. 1, 1909	Lyttelton Harbour Board ..	..	Lyttelton ..	†	5 „ * ..	†	..	(Included in No. 1316.)		
1203	R. 00/992 ..	Jan. 1, 1910	J. G. Ward and Co. (Limited) ..	..	Limehills ..	†	5 „ * ..	†	Repairs, £3	451 4 8	69 14 5	520 19 1
1206	R. 07/2503 ..	Nov. 1, 1908	North Otago Agricultural and Pastoral Association	..	Oamaru ..	Half-cost Grantees	5 „ * ..	Premium..	235 0 0	86 10 3	..	86 10 3
1209	R. 05/293 ..	Jan. 1, 1910	Friedlander Bros. (Limited) ..	..	Lyndhurst ..	†	10 „ * ..	†	..	28 16 4	390 4 5	419 0 9
1212	R. 99/367 ..	Feb. 1, 1910	N.Z. Farmers' Co-operative Association of Canterbury (Limited)	..	Ashburton ..	†	10 „ * ..	†	Rental, £25	937 16 2	718 10 3	1,656 6 5
1214	R. 00/991 ..	April 1, 1910	J. Montgomery and Co.	..	Addington ..	†	10 „ * ..	†	Rental, £5	821 0 1	392 19 7	1,213 19 8
1215	R. 99/2357 ..	May 1, 1910	James Craig and Co.	..	Oamaru ..	†	10 „ * ..	†	Rental, £50	772 11 5	257 7 7	1,029 19 0
1216	R. 00/1193 ..	April 1, 1910	J. and T. Meek	..	„ ..	†	10 „ * ..	†	Rental, £50	1,234 18 9	764 2 9	1,999 1 6
1218	R. 99/3088 ..	May 1, 1910	Wright, Stephenson, and Co. ..	..	Balfour ..	†	10 „ * ..	†	Rental, £25	340 12 9	980 3 10	1,320 16 7
1221	R. 08/3776 ..	April 1, 1910	Southland Frozen Meat and Produce Export Company (Limited)	..	Makarewa ..	Grantees	10 „ * ..	Premium..	473 0 0 Rental, £25	2,083 0 1	2,245 4 8	4,328 4 1
1222	R. 00/568 ..	July 1, 1910	Christchurch City Council ..	..	Chaney's ..	†	5 „ * ..	†	..	60 11 0	..	60 11 0
1223	R. 99/2653 ..	April 1, 1910	William White and Co. (Limited)..	..	Addington ..	†	10 „ * ..	†	Rental, £25	1,439 1 11	76 11 2	1,515 13 1
1225	R. 00/1774 ..	May 1, 1910	Lyttelton Harbour Board ..	..	Lyttelton ..	†	5 „ * ..	†	..	(Included in No. 1316.)		
1231	R. 03/2208 ..	Aug. 1, 1910	New Zealand Farmers' Co-operative Association of Canterbury (Ltd.)	..	Christchurch ..	†	10 „ * ..	..	Rental, £50	2,984 6 2	1,746 11 0	4,730 17 2

1235	R. 05/2886 ..	June 1, 1910	Milburn Lime and Cement Company (Limited)	..	Burnside ..	Grantees	10	*..	Premium..	978 0 0 Rental, £50	2 1 0	810 5 9	812 6 9
1239	R. 10/634 ..	Oct. 1, 1910	Canterbury Farmers' Co-operative Association (Limited)	..	Studholme ..	„	10	„ *..	„ ..	164 0 0 Rental, £25	572 1 3	1,623 7 5	2,195 8 8
1240	R. 10/2527 ..	July 1, 1910	G. S. Wilson and H. E. Wilson ..	..	Glenomaru ..	Grantee	5	„ *..	„ ..	230 0 0	..	21 6 9	21 6 9
1245	R. 05/3076 ..	Oct. 1, 1910	Timaru Harbour Board subtenants: (National Mortgage and Agency Company, Ltd., John Mill and Co., Shaw, Savill, and Co., Westland–Timaru Timber and Coal Company, Ltd., Westport Coal Company, Briscoe and Co., and Mason, Struthers, and Co.)	..	Timaru	†	5	„ *..	†	..	3,419 12 6	1,625 18 6	5,045 11 0
1256	R. 10/947 ..	Nov. 1, 1910	Miss Sophia McDonald	..	Whitecraig ..	Grantee	5	„ *..	Premium..	110 0 0	247 11 0	845 11 6	1,093 2 6
1258	R. 00/2042 ..	Oct. 1, 1910	National Mortgage and Agency Company of New Zealand (Limited)	..	Ashburton ..	†	10	„ *..	†	Repairs, £7/19/8 Rental, £25	(Included in No. 1105.)		
1259	R. 99/2905 ..	Oct. 1, 1910	Milburn Lime and Cement Company (Limited)	..	Pelichet Bay ..	†	10	„ *..	†	Rental, £50	3,277 13 7	2,298 7 2	5,576 0 9
1260	R. 00/1040 ..	Dec. 1, 1910	Wright, Stephenson, and Co. (Ltd.) Otago Farmers' Co.-op. Assn. of N.Z. (Limited)	..	Dunedin ..	†	10	„ *..	†	Rental, £50	2,502 7 0 5,740 13 1	390 11 7 1,219 2 8	2,892 18 7 6,959 15 9
1263	R. 00/141 ..	Jan. 1, 1911	Henry Harraway	..	Green Island ..	†	10	„ *..	†	Rental, £25	1,470 14 10	173 5 11	1,644 0 9
1265	R. 00/2041 ..	Feb. 1, 1911	R. Meek and Co., McCallum and Co.	..	Fairfax ..	†	5	„ *..	†	..	..	619 15 6	619 15 6
1266	R. 07/4656 ..	Jan. 1, 1911	John London	..	Geddes and Walton Park	Govt. ..	10	„ *..	†	..	11 0 6	68 12 0	79 12 6
1267	R. 01/1037 ..	Mar. 1, 1911	Lyttelton Harbour Board ..	..	Lyttelton ..	†	5	„ *..	†	..	(Included in No. 1316.)		
1268	R. 10/2436 ..	April 1, 1911	Shaw, Savill, and Albion Company (Limited)	..	Bluff	Grantees	10	„ *..	Premium..	116 0 0 Rental, £50	1,722 5 2	693 7 11	2,415 13 1
1273	R. 99/1934 ..	May 1, 1911	Fleming and Co. (Limited) ..	..	Gore	†	10	„ *..	†	Rental, £25	158 9 5	200 5 2	358 14 7
1274	R. 09/3044 ..	April 1, 1911	G. McClatchie and Co.	..	Leeston ..	†	10	„ *..	†	Rental, £25	296 4 4	17 12 11	313 17 3
1275	R. 04/562 ..	April 1, 1911	New Zealand Pine Company ..	..	Ryal Bush ..	†	5	„ *..	†	..	3 17 2	906 2 6	909 19 8
1277	R. 10/2870 ..	May 1, 1911	Invercargill Borough Council ..	..	Invercargill ..	Grantees	10	„ *..	Premium..	133 10 0 Rental, £50	260 0 0	..	260 0 0
1279	R. 09/5156 ..	Jan. 1, 1911	Dominion Lime and Phosphate Company (Limited)	..	Milburn ..	„	5	„ *..	„ ..	732 0 0	207 1 2	49 8 11	256 10 1
1281	R. 01/1604 ..	July 1, 1911	William Borlase	..	Sawyer's Bay ..	†	5	„ *..	†	..	..	111 17 4	111 17 4
1282	R. 10/2923 ..	July 1, 1911	South Otago Freezing Company (Limited)	2 9	Finegand ..	Grantees	10	„ *..	Premium..	550 0 0 Rental, £50	595 7 9	811 15 8	1,407 3 5
1290	R. 06/1868 ..	Sept. 1, 1911	National Mortgage and Agency Company of New Zealand (Limited)	..	Gore	†	5	„ *..	†	Repairs, £28 Rental, £25	524 14 5	394 4 10	918 19 3
1291	R. 03/2223 ..	Sept. 14, 1911	Federal Steam Navigation Company (Limited)	..	Ocean Beach ..	†	5	„ *..	†	Repairs, £1 Rental, £25	3,361 3 4	1,933 0 0	5,294 3 4
1292	R. 01/2857 ..	Dec. 1, 1911	D. H. Brown and Son	7 29	Addington ..	†	5	„ *..	†	Rental, £25	1,395 15 10	579 9 11	1,975 5 9
1294	R. 01/1660 ..	Aug. 1, 1911	Moir and Co.	..	Southbrook ..	†	10	„ *..	†	Rental, £25	630 14 5	487 10 7	1,118 5 0
1298	R. 01/2518 ..	Oct. 1, 1911	New Zealand Provision and Produce Company	..	Belfast ..	†	5	„ *..	†	Rental, £25	890 17 11	843 3 11	1,734 1 10
1302	R. 99/691 ..	Dec. 1, 1911	J. E. Watson and Co. (Limited) ..	..	Riversdale ..	†	10	„ *..	†	Rental, £25	137 9 7	1,072 13 6	1,210 3 1
1307	R. 99/2990 ..	Jan. 1, 1912	Invercargill Corporation	..	Greenhills ..	†	5	„ *..	†	Repairs, £7 10s	31 8 0	2,205 1 11	2,236 9 11
1311	R. 01/2438 ..	Jan. 1, 1912	Wood Bros. (Limited)	..	Addington ..	†	10	„ *..	†	Rental, £25	1,636 0 2	962 6 10	2,598 7 0
1312	R. 02/1454 ..	Feb. 1, 1912	Canterbury Farmers' Co-operative Assocation (Limited)	..	Studholme Junction	†	1	„ *..	†	Rental, £25	(Included in No. 1239.)		

* Three months' notice. † Siding originally laid under old agreement.

RETURN No. 24—*continued.*

PARTICULARS of Private-siding Traffic, showing Value of Traffic done during Twelve Months ending 31st March, 1913—*continued.*

Hd. Office Reg. No.	Papers.	Date of Grant.	Present Holder.	Position.	Nearest Station.	By whom paid for.	Term of Grant.	Amount of Traffic guaranteed per Annum.	Liquidated Damages or Premium.	Value of the Traffic through the Siding during the Year ending 31st March, 1913.		
										In.	Out.	Total.
SOUTH ISLAND MAIN LINE AND BRANCHES—*continued.*												
				M. ch.					£ s. d.	£ s. d.	£ s. d.	£ s. d.
1316	R. 03/754 ..	March 1, 1912	Lyttelton Harbour Board ..	..	Lyttelton ..	†	5 years* ..	†	..	5,616 0 4	1,562 14 5	7,178 14 9
1317	R. 97/1122 ..	Mar. 1, 1912	William Harrison	..	Winchester ..	†	5 " * ..	†	Repairs, £6 Rental, £25	..	172 2 4	172 2 4
1321	R. 00/1690 ..	Jan. 1, 1912	Christchurch Meat Company (Limited)	..	Burnside ..	†	10 " * ..	†	Repairs, £70 Rental, £50	2,569 15 0	2,484 3 2	5,053 18 2
1322	R. 12/897 ..	April 1, 1912	New Zealand Pine Company ..	..	Bush Siding ..	Grantee	5 " * ..	Premium ..	74 0 0	126 3 11	322 15 6	448 19 5
1325	R. 07/2200 ..	Aug. 1, 1912	George Bailey	..	Templeton ..	†	5 " * ..	†	Repairs, £2 7s.	..	32 4 0	32 4 0
1328	R. 01/1860 ..	July 1, 1912	Christchurch City Council ..	..	Sockburn ..	†	5 " * ..	†	..	522 19 6	..	522 19 6
1330	R. 99/2224 ..	Feb. 1, 1912	Canterbury Farmers' Co-operative Association (Limited)	..	Timaru ..	Grantees	10 " * ..	Premium ..	497 0 0 Rental, £50	2,221 11 8	823 11 11	3,045 3 7
1333	R. 12/3242 ..	April 1, 1912	Public Works Department ..	..	Addington ..	"	5 " * ..	..	..	99 1 11	123 14 3	222 16 2
1335	R. 12/3244 ..	April 1, 1912	Public Works Department ..	..	Dunedin ..	"	5 " * ..	..	..	26 6 0	401 15 9	428 1 9
1338	R. 02/2053 ..	April 1, 1912	Southland Frozen Meat and Produce Export Company (Limited)	..	Mataura ..	†	5 " * ..	†	Rental, £25	1,407 8 10	4,605 17 1	6,013 5 11
1345	R. 98/4318 ..	Oct. 1, 1912	C. and W. Gore	..	Wingatui ..	†	1 " * ..	†	..	228 5 5	945 9 5	1,173 14 10
1349	R. 01/1837 ..	April 1, 1912	National Mortgage and Agency Company of New Zealand (Limited)	..	Addington ..	†	10 " * ..	Premium ..	105 0 0 Rental, £25	1,202 7 1	471 15 1	1,674 2 2
1350	R. 01/1661 ..	April 1, 1912	Kempthorne, Prosser, and Co.'s New Zealand Drug Company (Limited)	..	Burnside ..	†	10 " * ..	†	Rental, £50	1,394 15 1	4,694 9 11	6,089 5 0
1352	R. 00/1324 ..	May 1, 1912	Andersons Limited	..	Lyttelton ..	†	1 7/12 " * ..	†	Rental, £50	145 16 10	362 16 9	508 13 7
1353	R. 02/1439 ..	April 1, 1912	Otago Dock Trust	..	Port Chalmers ..	†	5 " * ..	†	Rental, £50	475 13 1	80 12 7	556 5 8
1354	R. 05/2588 ..	July 1, 1912	C. P. Sleeman	..	Mataura ..	†	1 " * ..	†	..	..	1,791 11 4	1,791 11 4
1358	R. 07/2596 ..	Sept. 1, 1912	Southland Sawmilling Company ..	37 32	Te Tumutu ..	†	1 1/3 " * ..	†	..	19 4 1	747 15 8	766 19 9
1359	R. 11/4617 ..	Oct. 1, 1912	Wairio Railway and Coal Company (Limited)	..	Wairio	Grantees	5 " * ..	Premium ..	382 0 0	19 15 3	..	19 15 3
1365	R. 12/3534 ..	Oct. 1, 1912	S. P. Andrews	..	Coalgate ..	Grantee	5 " * ..	..	373 0 0	..	28 4 10	28 4 10
1366	R. 11/4447 ..	Oct. 5, 1912	Corporation of Invercargill ..	..	Invercargill ..	†	1 " * ..	†	Rental, £50	118 16 0	..	118 16 0
1367	R. 06/1347 ..	Jan. 1, 1913	N.Z. Loan and Mercantile Agency Company (Limited), and reduced	..	Chertsey ..	Grantees	5 " * ..	Premium ..	13 0 0 Rental, £25	..	64 1 2	64 1 2
1370	R. 06/4051 ..	Oct. 1, 1912	Dunedin Saleyards Company (Limited)	..	Burnside ..	†	5 " * ..	†	..	2,470 13 0	1,867 18 2	4,338 11 2
1371	R. 12/3167 ..	Oct. 1, 1912	Otago Iron Rolling Mills Company (Limited)	0 6	Green Island ..	†	10 " * ..	†	Rental, £50	1,216 18 5	110 7 7	1,327 6 0
1374	R. 02/3673 ..	Nov. 1, 1912	N.Z. Loan and Mercantile Agency Company (Limited), and reduced	..	Timaru ..	†	5 " * ..	Premium ..	107 7 6 Rental, £50	790 11 7	483 7 5	1,273 19 0
1375	R. 00/2781 ..	Jan. 1, 1913	Canterbury Central Co-operative Dairy Company (Limited)	..	Addington ..	†	10 " * ..	†	Rental, £50	1,448 7 9	216 12 5	1,665 0 2
1377	R. 12/1494 ..	Jan. 1, 1913	Christchurch Meat Company (Limited)	..	Pukeuri ..	Grantees	10 " * ..	Premium ..	1,000 0 0	..	..	..
1378	R. 05/669 ..	May 1, 1912	H. A. Massey	..	Gore	†	5 " * ..	†	Rental, £25	61 2 3	80 1 3	141 3 6
1379	R. 00/1107 ..	Jan. 1, 1913	J. and G. Drummond	4 72	Conical Hill ..	†	5 " * ..	†	Repairs, £1	..	226 15 6	226 15 6
1380	R. 12/2775 ..	Dec. 1, 1912	Southland Farmers' Co-operative Association (Limited)	..	Invercargill ..	Grantees	10 " * ..	Premium ..	115 10 0 Rental, £50	8 10 0	3 1 6	11 11 6

1381	R. 02/3211 ..	Jan. 1, 1913	J. G. Ward and Co. (Limited) ..	..	Bluff	†	5 „ *..	†	Rental, £50	1,095 9 11	412 2 1	1,507 12 0
1390	R. 10/1418 ..	Nov. 1, 1912	Canterbury Saleyards Company (Limited)	..	Addington ..	†	5 „ *..	†	..	..	..	..
1391	R. 12/3166 ..	Oct. 1, 1912	Canterbury Frozen Meat and Dairy-produce Export Company (Limited)	..	Belfast ..	†	10 „ *..	†	Repairs, £175 Rental, £25	7,472 18 6	6,990 15 0	14,463 13 6
1392	R. 02/3422 ..	Jan. 1, 1913	William H. Martyn	..	Wetheral ..	†	5 „ *..	†	Rental, £25	0 11 7	122 12 4	123 3 11
1396	R. 12/5553 ..	Jan. 1, 1913	Lyttelton Harbour Board ..	..	Lyttelton ..	Govt. ..	5 „ *..	..	..	(Included in No. 1316.)		

WESTLAND SECTION.

1007	R. 00/2624 ..	Aug. 1, 1906	Dispatch Foundry Company (Ltd.)	..	Greymouth ..	Grantees	10 years* ..	†	Rental, £25	78 17 8	184 9 2	263 6 10
1073	R. 07/3061 ..	Jan. 1, 1908	Te Kinga Land and Timber Company (Limited)	25 20	Te Kinga ..	„	5 „ *..	Premium..	300 0 0	101 7 4	1,408 2 11	1,509 10 3
1102	R. 99/1729 ..	Sept. 1, 1908	Stratford, Blair, and Co.	..	Arnold's ..	„	5 „ *..	„ ..	5 10 0	7 16 1	364 0 10	371 16 11
1107	R. 03/1446 ..	Oct. 1, 1908	W. T. Ogilvie	..	Gladstone ..	„	5 „ *..	†	..	77 8 7	583 9 9	660 18 4
1120	R. 08/3246 ..	Nov. 3, 1908	Westland Stone Company (Limited)	..	Dobson ..	„	5 „ *..	Premium..	376 10 0	..	9 1 4	9 1 4
1152	R. 03/4351 ..	July 1, 1909	G. T. Moss	..	Te Kinga ..	„	5 „ *..	†	..	..	..	..
1155	R. 03/2385 ..	Nov. 1, 1908	Westland Kapitea Brick Company (Limited)	..	Kapitea ..	†	5 „ *..	†	Repairs, £10	51 6 0	69 2 1	120 8 1
1156	R. 03/2385 ..	Nov. 1, 1908	Westland Kapitea Brick Company (Limited)	..	„ ..	†	5 „ *..	†	Repairs, £10			
1168	R. 03/4189 ..	June 1, 1909	Red Jacks Sawmilling Company ..	..	Ngahere ..	†	5 „ *..	†	..	..	1,045 9 6	1,045 9 6
1172	R. 03/3096 ..	April 1, 1909	William Morris	..	Kumara ..	Grantees	5 „ *..	Premium..	305 0 0	..	..	..
1183	R. 99/2900 ..	Nov. 1, 1909	J. C. Malfroy and Co.	..	Ho Ho ..	†	5 „ *..	†	..	489 8 1	1,235 3 8	1,724 11 9
1184	R. 99/1730 ..	April 1, 1909	Stratford, Blair, and Co.	..	Greymouth ..	Grantees	10 „ *..	Premium..	20 0 0 Rental, £25	934 7 0	148 14 7	1,083 1 7
1187	R. 08/4493 ..	April 1, 1909	Ikamatua Sawmilling Company ..	..	„ ..	†	10 „ *..	„ ..	20 0 0 Rental, £25	30 1 4	399 17 3	429 18 7
1208	R. 04/2611 ..	Nov. 1, 1909	Grey Valley Timber Company (Limited)	6 16	Ngahere ..	†	5 „ *..	†	..	..	983 16 7	983 16 7
1213	R. 09/2106 ..	Dec. 1, 1909	Butler Bros.	..	Ruatapu ..	Grantees	5 „ *..	Premium..	180 0 0	163 3 3	2,819 5 4	2,982 8 7
1247	R. 02/554 ..	Oct. 1, 1910	William Goss (Limited)	..	Moana	†	5 „ *..	†	Repairs, £6/12/	7 15 4	700 10 1	708 5 5
1248	R. 02/553 ..	Oct. 1, 1910	Kotuku Sawmilling Company ..	..	Aratika ..	†	5 „ *.	†	Repairs, £6	14 10 2	763 13 1	778 3 3
1250	R. 02/557 ..	Oct. 1, 1910	Stratford, Blair, and Co. (Limited)	..	Kokiri	†	5 „ *..	†	Repairs, £18/14/	19 16 4	737 6 10	757 3 2
1251	R. 02/556 ..	Oct. 1, 1910	Lake Brunner Sawmilling Company	..	Ruru	†	5 „ *..	†	..	93 12 8	3,028 0 11	3,121 13 7
1254	R. 02/558 ..	Oct. 1, 1910	Baxter Brothers	..	Kokiri	†	5 „ *..	†	Repairs. £6/12/	29 15 6	751 16 10	781 12 4
1255	R. 08/3432 ..	Feb. 1, 1910	North Brunner Coal Company (Ltd.)	..	Stillwater ..	Grantees	5 „ *..	Premium..	50 0 0	10 2 2	1,833 11 10	1,843 14 0
1264	R. 00/197 ..	Jan. 1, 1910	K. K. Sawmilling Company ..	..	Kumara ..	†	5 „ *..	†	..	23 15 5	1,010 19 11	1,034 15 4
1270	R. 05/1908 ..	Dec. 1, 1910	Murphy and Co.	..	Stafford ..	†	5 „ *..	†	..	92 11 7	..	92 11 7
1271	R. 02/552 ..	May 23, 1911	Blackball Coal Company	..	Blackball ..	Grantees	5 „ *..	Premium ..	98 0 0	169 13 7	23,249 7 9	23,419 1 4
1272	R. 01/356 ..	April 1, 1911	Westland Sawmilling Company (Limited)	..	Inchbonnie ..	†	5 „ *..	†	Repairs, £6	56 8 10	775 9 10	831 18 8
1280	R. 10/2362 ..	April 1, 1911	Westland Sawmilling Company (Limited)	..	Cameron's ..	Grantees	5 „ *..	†	150 0 0	38 2 0	478 18 6	517 0 6
1300	R. 07/774 ..	Nov. 1, 1911	Stratford, Blair, and Co. (Limited)	..	Hukarere ..	†	5 „ *..	†	..	95 4 1	1,367 19 3	1,463 3 4
1301	R. 01/456 ..	Oct. 1, 1911	Jack Bros.	..	Kotuku ..	†	5 „ *..	†	..	1 19 2	2,192 16 4	2,194 15 6
1327	R. 12/193 ..	April 1, 1912	Gibson and Harris	..	Reefton ..	Grantees	5 „ *..	Premium..	166 0 0	..	163 19 6	163 19 6
1344	R. 12/3761 ..	May 1, 1912	Greymouth Harbour Board ..	..	Greymouth ..	Govt. ..	5 „ *..	..	..	..	..	..
1394	R. 12/3867 ..	Jan. 1, 1913	Brunner Collieries Company (Limited)	..	Brunner ..	†	5 „ *..	†	..	44 0 9	2,935 1 2	2,979 1 11
1397	R. 06/440 ..	Mar. 1, 1913	Ikamatua Sawmilling Company ..	..	Ikamatua ..	†	5 „ *..	†	..	63 6 3	770 17 6	834 3 9

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* Three months' notice.

† Siding originally laid under old agreement.

RETURN No. 24—*continued.*

PARTICULARS of PRIVATE-SIDING TRAFFIC, showing Value of Traffic done during Twelve Months ending 31st March, 1913—*continued.*

Hd. Office Reg. No.	Papers.	Date of Grant.	Present Holder.	Position.	Nearest Station.	By whom paid for.	Term of Grant.	Amount of Traffic guaranteed per Annum.	Liquidated Damages or Premium.	Value of the Traffic through the Siding during the Year ending 31st March, 1913.		
										In.	Out.	Total.
				M. ch.					s. d.	£ s. d.	£ s. d.	£ s. d.
					WESTPORT SECTION.							
1159	R. 00/2091 ..	Mar. 1, 1909	J. and S. Marris	26 70	Mokihinui ..	†	5 years* ..	†	..	13 13 11	185 15 11	199 9 10
1195	R. 00/2091 ..	Aug. 1, 1909	D. P. Mumm	..	〃 ..	†	5 〃 * ..	†	..	1 13 9	..	1 13 9
1340	R. 07/865 ..	Mar. 1, 1912	N.Z. Government Mines Department	..	Westport ..	†	1 〃 * ..	†	..	..	..	..
1355	R. 07/591 ..	Sept. 1, 1912	Westport Stockton Coal Company (Limited)	..	Ngakawau ..	†	5 〃 * ..	†	..	279 19 4	14,979 6 7	15,259 5 11
					NELSON SECTION.							
958	R. 05/892 ..	July 1, 1905	E. Buxton and Co. (Limited) ..	..	Nelson ..	Grantees	10 years* ..	Premium..	180 0 0 Rental, £25	260 15 2	79 15 3	340 10 5
—	R. 00/1834 ..	Oct. 1, 1899	Nelson Seed and Produce Company	..	〃 ..	(Right held in connection with lease)		〃 ..	67 18 0	..	..	..
1204	R. 08/3377 ..	Sept. 1, 1908	Nelson Freezing Company (Limited)	..	Stoke ..	Grantees	10 years* ..	〃 ..	320 0 0 Rental, £50	227 2 3	141 11 10	368 14 1
1241	R. 00/2399 ..	Jan. 1, 1910	Neale and Haddow	1 0	Nelson ..	†	10 〃 * ..	†	Rental, £25	314 15 8	13 10 9	328 6 5
					PICTON SECTION.							
870	R. 93/3737 ..	Nov. 1, 1903	N.Z. Loan and Mercantile Agency Company (Limited)	17 62	Blenheim ..	Grantees	10 years* ..	†	Rental, £25	360 11 6	341 0 2	701 11 8
1098	R. 06/1461 ..	Jan. 1, 1909	Corry and Co.	..	〃 ..	〃	10 〃 * ..	Premium..	265 0 0 Rental, £25	372 9 6	839 14 3	1,212 3 9
1303	R. 02/866 ..	Nov. 1, 1911	N.Z. Loan and Mercantile Agency Company (Limited)	..	Picton ..	†	5 〃 * ..	†	Rental, £25	210 7 2	119 10 0	329 17 2
1313	R. 01/2132 ..	Feb. 1, 1912	Levin and Co. (Limited)	17 69	Blenheim ..	†	10 〃 * ..	†	Repairs, £15; Rental, £25	556 19 9	796 15 0	1,353 14 9
1356	R. 99/2880 ..	July 1, 1912	Robert H. Smale	13 35	Spring Creek ..	†	1 〃 * ..	†	Rental, £25	45 2 10	57 15 10	102 18 8

* Three months' notice. † Siding originally laid under old agreement.

RETURN No. 25.

Statement showing approximately Sleepers laid and removed up to 31st March, 1913.

Year.	Approximate Length opened each Year.						Sleepers.	
	North Island.		Middle Island.		Total.		Laid during Construction. (2,100 per mile.)	Removed during Maintenance.
	M.	ch.	M.	ch.	M.	ch.		
1867	..		45	70	45	70	96,338	..
1870–71	..		18	58	18	58	39,323	..
1871–72	..		11	68	11	68	24,885	..
1872–73	..		27	62	27	62	58,327	..
1873–74	10	55	11	21	21	76	46,095	..
1874–75	61	19	126	78	188	17	395,246	..
1875–76	69	23	248	4	317	27	666,409	..
1876–77	64	24	152	39	216	63	455,254	..
1877–78	103	76	94	58	198	54	417,217	..
1878–79	27	19	56	46	83	65	176,006	..
1879–80†	26	33	40	73	67	26	141,382	..
1880–81	68	39	32	71	101	30	212,888	74,261
1881–82	22	67	40	16	63	3	132,379	73,947
1882–83	2	2	40	19	42	21	88,751	106,763
1883–84	22	19	22	50	44	69	94,211	125,632
1884–85	56	0	24	0	80	0	168,000	148,325
1885–86	43	26	47	52	90	78	191,048	137,993
1886–87	58	72	11	39	70	31	147,814	139,040
1887–88	11	47	17	32	28	79	60,874	122,027
1888–89	18	31	..		18	31	42,814	108,690
1889–90	11	57	20	68	32	45	68,381	129,634
1890–91	28	21	5	68	34	9	71,636	133,954
1891–92	..		27	27	27	27	57,408	139,912
1892–93	17	26	..		17	26	36,382	132,569
1893–94	28	38	33	58	62	16	130,620	155,827
1894–95	16	62	27	24	44	6	92,558	170,681
1895–96	14	73	3	48	18	41	38,876	188,291
1896–97	3	64	1	11	4	75	10,370	210,588
1897–98	27	46	10	2	37	48	78,960	243,479
1898–99	22	46	11	13	33	59	70,848	282,326
1899–1900	..		19	26	19	26	40,582	302,354
1900–1901	4	30	103	38	107	68	226,485	345,433
1901–1902	11	20	12	32	23	52	49,665	369,339
1902–1903	28	40	27	43	56	3	117,679	330,029
1903–1904	33	12	4	44	37	56	79,170	309,296
1904–1905	17	61	27	75	45	56	95,970	302,252
1905–1906	23	5	8	52	31	57	66,596	309,183
1906–1907	..		50	7	50	7	105,184	283,293
1907–1908	10	38	4	61	15	19	31,999	331,678
1908–1909	186	21	23	21	209	42	440,003	279,190
1909–1910	3	60	31	43	35	23	74,104	236,390
1910–1911	14	64	29	76	44	60	93,975	282,682
1911–1912	23	30	23	1	46	31	97,414	273,586
1912–1913	25	37	26	77	52	34	110,092	235,378
Totals	..		..		..		5,940,218	7,014,022

* Complete information not recorded until 1880–81. † Nine months only.

RETURN No. 26.

Comparative Statement of the Number of Employees for March, 1912, and March, 1913.

Department.	Whangarei–Kawakawa.	Kaihu.	Gisborne.	North Island Main Line and Branches.	South Island Main Line and Branches.	Westland.	Westport.	Nelson.	Picton.	Total.
1912–13.										
General	..	..	..	..	..	..	..	..	..	718
Traffic	35	7	17	2,253	1,865	134	77	50	31	4,469
Maintenance	67	8	20	2,136	1,695	155	41	46	72	4,240
Locomotive	40	8	16	2,394	2,041	133	106	21	27	4,786
Totals	142	23	53	6,783	5,601	422	224	117	130	14,213
1911–12.										
General	..	..	..	..	..	..	..	..	..	673
Traffic	34	7	16	1,919	1,797	131	84	42	34	4,064
Maintenance	68	10	14	2,010	1,750	193	61	68	134	4,308
Locomotive	33	4	13	2,193	1,949	132	105	19	30	4,478
Totals	135	21	43	6,122	5,496	456	250	129	198	13,523

RETURN No. 27.

Statement of Accidents for the Year ending 31st March, 1913.

—	Train Accidents.									Accidents on Line (other than Train-running).						Shunting Accidents.						Accidents on Wharves and in Sheds.						Accidents in Workshops.						Total.		
	Passengers.			Employees.			Other Persons.			Employees.			Other Persons.			Employees.			Other Persons.			Employees.			Other Persons.			Employees.			Other Persons.					
	Fatal.	Serious.	Minor.	Fatal.	Serious.	Minor.	Fatal.	Serious.	Minor.	Fatal.	Serious.	Minor.	Fatal.	Serious.	Minor.	Fatal.	Serious.	Minor.	Fatal.	Serious.	Minor.	Fatal.	Serious.	Minor.	Fatal.	Serious.	Minor.	Fatal.	Serious.	Minor.	Fatal.	Serious.	Minor.	Fatal.	Serious.	Minor.
Whangarei–Kawakawa	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2
Kaihu	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Gisborne	..	..	..	..	..	..	..	..	1	..	..	2	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	4
North Island Main Line and Branches	1	..	..	..	..	19	1	..	10	2	..	130	..	..	2	3	..	56	..	1	..	..	..	135	..	..	..	..	..	86	..	..	..	7	1	438
South Island Main Line and Branches	..	..	6	..	..	..	8	2	7	1	..	81	..	..	1	2	2	51	2	..	2	..	..	137	..	..	..	..	..	109	..	..	..	13	4	394
Westland	1	..	..	..	..	..	..	..	1	..	..	4	..	..	..	1	..	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	..	7
Westport	..	..	..	..	..	..	..	..	..	..	..	4	..	..	..	..	..	1	..	..	..	..	..	8	..	..	..	..	..	8	..	..	..	..	..	21
Nelson	..	..	..	..	..	..	..	..	..	..	..	6	..	..	..	..	..	1	..	..	..	..	..	2	..	..	..	..	..	3	..	..	..	..	..	12
Picton	..	..	..	..	..	..	..	..	..	..	..	9	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	10
Totals	2	..	6	..	..	19	9	2	19	3	..	237	..	..	3	6	2	112	2	1	3	..	..	283	..	..	..	..	..	206	..	..	..	22	5	888

RETURN No. 28

LOCOMOTIVE RETURNS for the Year ending 31st March, 1913.

Type.	Number of Engines.	Average Speed—Miles per Hour.	Engine-Mileage.				Quantity of Stores.				Cost.					Cost per Engine-Mile in Pence.					Days in Steam.
			Detail.			Total	Running.				Repairs.	Running.			Total.	Repairs.	Running.			Total.	
			Train.	Shunting and Empty.	Work-train.		Coal.	Oil.	Tallow.	Waste.	Wages and Material.	Stores.	Fuel.	Wages.		Wages and Material.	Stores.	Fuel.	Wages.		
WHANGAREI SECTION.																					
							Cwt.	Qt.	lb.	lb.	£	£	£	£	£						
C	1	15	5,653	3,668	27	9,348	2,479	259	19	116	435	10	56	185	686	11·17	0·25	1·44	4·75	17·61	140
D	1	15	7,222	4,757	2,934	14,913	4,071	406	33	172	213	15	92	290	610	3·43	0·24	1·48	4·66	9·81	191
FA	2	17	42,166	6,100	723	48,989	15,937	1,509	128	520	355	57	362	827	1,601	1·74	0·28	1·77	4·05	7·84	440
WB ..	3	17	60,005	12,601	885	73,491	44,186	2,493	207	968	1,067	95	1,003	1,356	3,521	3·48	0·31	3·27	4·43	11·49	643
Totals ..	7	..	115,046	27,126	4,569	146,741	66,673	4,667	387	1,776	2,070	177	1,513	2,658	6,418	3·39	0·29	2·47	4·35	10·5	1,414
General charges	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1,062	..	..	..	..	1·73	..
Totals ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	7,480	..	..	..	..	12·23	..
KAIHU SECTION.																					
F	2	15	13,326	4,199	5,217	22,742	5,286	402	37	224	178	17	353	494	1,042	1·87	0·18	3·73	5·21	10·99	383
General charges	..	..	..	..	..	..	..	..	..	..	..	..	..	..	160	..	..	..	..	1·69	..
Totals ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1,202	..	..	..	..	12·68	..
GISBORNE SECTION.																					
D*	1	12	31	..	3,340	3,371	..	..	..	..	11	..	..	..	11	0·77	..	..	..	0·77	34
FA	1	15	14,765	4,082	61	18,908	5,530	1,239	42	341	295	42	405	388	1,130	3·74	0·53	5·14	4·93	14·34	202
WA ..	3	15	29,647	6,459	7,168	43,274	17,180	2,792	82	775	437	94	1,254	913	2,698	2·42	0·52	6·96	5·06	14·96	524
Totals ..	5	..	44,443	10,541	10,569	65,553	22,710	4,031	124	1,116	743	136	1,659	1,301	3,839	2·72	0·5	6·07	4·77	14·06	760
General charges	..	..	..	..	..	..	..	..	..	..	..	..	..	..	692	..	..	..	..	2·53	..
Totals ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	4,531	..	..	..	..	16·59	..

This D was transferred to Auckland Section in May, 1912. Fuel, stores, &c., supplied by Public Works Department.

RETURN No. 28—*continued.*

LOCOMOTIVE RETURNS for the Year ending 31st March, 1913—*continued.*

Type.	Number of Engines.	Average Speed—Miles per Hour.	Engine-Mileage.				Quantity of Stores.				Cost.					Cost per Engine-Mile in Pence.					Days in Steam.
			Detail.			Total.	Running.				Repairs.	Running.			Total.	Repairs.	Running.			Total.	
			Train.	Shunting and Empty.	Work-train.		Coal.	Oil.	Tallow.	Waste.	Wages and Material.	Stores.	Fuel.	Wages.		Wages and Material.	Stores.	Fuel.	Wages.		
NORTH ISLAND MAIN LINE AND BRANCHES.																					
							Cwt.	Qt.	lb.	lb.	£	£	£	£	£						
A and AD	37	25	1,064,219	53,542	690	1,118,451	498,120	64,856	2,231	19,116	11,581	2,330	26,392	17,724	58,027	2·49	0·5	5·66	3·8	12·45	8,499
BC	1	20	20,757	2,334	..	23,091	13,813	1,405	74	640	341	56	812	510	1,719	3·55	0·58	8·44	5·3	17·87	277
C*	3	15	16	30,155	5	30,176	4,530	574	78	476	81	26	266	589	962	0·64	0·21	2·12	4·68	7·65	745
D† ..	10	15	22,593	85,951	36,300	144,844	24,572	3,299	236	1,207	622	108	1,437	3,040	5,207	1·03	0·18	2·38	5·03	8·62	2,463
E‡ (old type)	4	20	10,914	8,873	51,678	71,465	23,102	2,470	160	1,120	1,264	87	1,361	1,574	4,286	4·24	0·29	4·57	5·29	14·39	845
E (new type)	1	6	3,630	1,156	..	4,786	5,133	912	45	336	393	34	302	177	906	19·71	1·7	15·14	8·88	45·43	97
F and FA ..	29	20	164,783	354,681	71,581	591,045	187,910	21,447	1,008	5,891	8,472	711	9,112	16,311	34,606	3·44	0·29	3·7	6·62	14·05	7,601
H	6	6	25,772	17,942	20	43,734	45,971	4,209	272	1,823	3,207	148	2,701	2,158	8,214	17·6	0·81	14·82	11·85	45·08	1,241
J	17	20	416,675	70,159	225	487,059	210,053	18,026	735	5,450	9,000	618	10,922	9,626	30,166	4·43	0·3	5·38	4·75	14·86	4,396
K	2	25	31,754	8,105	2,684	42,543	16,492	1,372	92	693	188	53	786	937	1,964	1·06	0·3	4·43	5·29	11·08	580
L	9	20	144,203	43,346	11,714	199,263	67,677	6,661	298	1,822	2,646	227	3,202	4,001	10,076	3·19	0·27	3·86	4·82	12·14	2,132
M	4	20	77,445	14,940	6,388	98,773	27,716	2,333	132	801	1,671	82	1,630	1,420	4,803	4·06	0·2	3·96	3·45	11·67	786
N (simple) ..	11	25	311,057	34,579	3,416	349,052	162,999	12,539	576	1,304	7,317	450	9,390	5,730	22,887	5·03	0·31	6·46	3·94	15·74	2,828
N (compound), NA, and NC	5	20	141,372	7,613	2,322	151,307	69,363	5,644	268	2,162	2,791	209	4,089	2,495	9,585	4·41	0·33	6·47	3·96	15·2	1,224
O and OB (simple)	8	18	164,030	21,781	110	185,921	106,245	7,935	390	2,954	1,927	286	6,241	4,124	12,578	2·49	0·37	8·06	5·32	16·24	1,914
OA and OC (compound)	2	20	33,169	4,393	66	37,628	23,975	2,441	116	911	1,556	92	1,407	886	3,941	9·93	0·59	8·97	5·65	25·14	446
P	4	18	67,518	14,405	26,501	108,424	56,665	4,227	169	1,294	1,015	149	2,704	2,355	6,223	2·25	0·33	5·99	5·21	13·78	1,101
Q	6	25	225,697	17,689	756	244,142	155,635	11,268	286	2,594	2,527	383	7,360	4,060	14,330	2·48	0·38	7·24	3·99	14·09	1,672
R	10	20	75,708	92,390	37,582	205,680	75,761	7,892	449	3,232	3,040	273	4,338	5,058	12,709	3·55	0·32	5·06	5·9	14·83	2,419
S	4	20	52,622	36,733	5,168	94,523	37,637	4,815	215	1,935	1,247	176	2,213	2,304	5,940	3·17	0·45	5·62	5·85	15·09	998
T	2	18	40,760	7,999	174	48,933	26,945	1,871	74	590	877	65	1,323	1,072	3,337	4·3	0·32	6·49	5·26	16·37	502
CD	2	30	55,049	1,913	446	57,408	29,023	2,149	109	1,039	995	84	1,706	802	3,587	3·79	0·35	7·13	3·73	15·0	479
V	3	20	60,776	13,368	2,437	76,581	34,743	3,445	128	988	1,898	114	2,048	1,498	5,558	5·95	0·36	6·42	4·69	17·42	720
WA, WF, WG, and WH	50	25	1,074,025	184,956	31,764	1,290,745	602,367	53,963	2,203	16,310	20,904	1,899	33,113	25,409	81,325	3·89	0·35	6·16	4·72	15·12	12,347
WB, WD, and WJ	18	20	466,582	74,582	14,264	555,428	284,282	23,929	1,001	7,391	8,885	872	16,455	11,014	37,226	3·84	0·38	7·11	4·76	16·09	4,784
WE ..	2	15	24,284	7,221	50	31,555	23,766	2,549	113	905	1,541	89	1,400	867	3,897	11·72	0·68	10·65	6·59	29·64	456
X	8	20	229,395	15,896	333	245,624	170,899	30,088	493	4,213	7,430	990	10,045	4,961	23,426	7·26	0·97	9·81	4·85	22·89	2,064
Totals ..	258	..	5,004,805	1,226,702	306,674	6,538,181	2,985,394	302,229	11,951	90,494	103,336	10,611	162,746	130,793	407,486	3·79	0·39	5·98	4·8	14·96	63,616
General charges	..	..	..	..	..	..	..	..	..	..	..	..	..	..	57,703	..	..	..	..	2·12	..
Totals ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	465,189	..	..	..	..	17·08	..

* Fuel, stores, &c., for one C supplied by Stores Department.

† Fuel stores, &c., for three D's supplied by Stores and Public Works Departments.

‡ Written off.

RETURN No 28—*continued.*

LOCOMOTIVE RETURNS for the Year ending 31st March, 1913—*continued.*

Type.	Number of Engines.	Average Speed—Miles per Hour.	Engine-Mileage.				Quantity of Stores.				Cost.					Cost per Engine-Mile in Pence.					Days in Steam.
			Detail.			Total.	Running.				Repairs.	Running.			Total.	Repairs.	Running.			Total.	
			Train.	Shunting and Empty.	Work-train.		Coal.	Oil.	Tallow.	Waste.	Wages and Material.	Stores.	Fuel.	Wages.		Wages and Material.	Stores.	Fuel.	Wages.		
							SOUTH ISLAND MAIN LINE AND BRANCHES.														
							Cwt.	Qt.	lb.	lb.	£	£	£	£	£						
A (simple) ..	1	30	29,316	997	..	30,313	11,960	846	65	431	610	36	683	373	1,702	4·83	0·28	5·41	2·95	13·47	185
A (compound)	7	30	204,365	6,790	..	211,155	85,830	6,839	380	2,829	4,755	266	4,426	2,754	12,201	5·41	0·3	5·03	3·13	13·87	1,269
B	8	20	178,572	27,560	208	206,340	124,860	8,785	387	3,128	4,486	287	7,550	4,812	17,135	5·22	0·33	8·78	5·6	19·93	1,994
BA	8	20	119,079	18,767	78	137,924	78,354	6,041	302	2,409	711	236	4,632	3,432	9,011	1·23	0·41	8·06	5·97	15·67	1,445
D	15	18	4,132	138,280	2,684	145,096	41,488	3,106	274	1,866	1,745	117	1,596	4,674	8,132	2·89	0·19	2·64	7·73	13·45	2,657
F and FA ..	41	20	166,016	491,718	67,615	725,349	258,617	18,116	1,332	7,126	7,956	604	9,438	21,796	39,774	2·63	0·2	3·12	7·21	13·16	10,179
J	15	25	276,044	37,387	28,800	342,231	166,329	9,486	719	4,560	4,266	362	6,197	6,936	17,761	2·99	0·25	4·35	4·86	12·45	3,687
K	6	25	70,833	5,999	12,132	88,964	31,993	1,856	175	1,256	1,020	77	1,714	1,647	4,458	2·75	0·21	4·62	4·44	12·03	1,108
L	1	20	13,774	2,684	284	16,742	4,665	421	48	200	71	17	265	497	850	1·02	0·24	3·8	7·12	12·18	287
P	6	18	123,229	15,225	1,326	139,780	79,534	5,492	232	1,814	783	195	4,161	3,123	8,262	1·35	0·34	7·14	5·36	14·19	1,469
Q	7	30	203,301	12,245	..	215,546	113,370	6,371	249	2,048	2,946	238	4,895	3,070	11,149	3·28	0·26	5·45	3·42	12·41	1,444
R	8	20	52,629	60,566	33,644	146,839	44,064	3,364	365	2,292	2,038	131	2,195	3,814	8,178	3·33	0·21	3·59	6·23	13·36	1,822
T	4	18	65,410	5,858	143	71,411	35,961	1,987	129	1,012	1,639	77	2,194	1,626	5,536	5·51	0·26	7·37	5·47	18·61	837
U, UA, and UC	25	30	639,133	36,954	862	676,949	327,097	20,083	1,135	8,594	9,798	750	18,083	11,834	40,465	3·47	0·26	6·42	4·19	14·34	6,019
UB ..	22	30	586,264	33,005	1,023	620,292	299,728	18,296	938	7,195	13,246	679	17,746	10,307	41,978	5·12	0·26	6·87	3·99	16·24	5,023
V	10	25	244,461	21,202	651	266,314	187,768	6,374	439	3,183	2,898	239	4,165	5,096	12,398	2·61	0·22	3·75	4·59	11·17	2,618
W[illegible] ..	16	25	294,345	73,158	18,301	385,804	164,826	13,759	791	5,271	6,040	466	9,698	9,164	25,368	3·76	0·29	6·03	5·7	15·78	1,240
WD ..	4	20	54,371	17,928	15,717	88,016	34,820	3,433	167	1,288	1,459	116	2,126	2,080	5,781	3·98	0·31	5·8	5·67	15·76	987
Totals ..	204	..	3,325,274	1,006,323	183,468	4,515,065	2,091,261	134,655	8,127	56,499	66,447	4,893	101,764	97,635	270,139	3·53	0·26	5·41	5·16	14·36	47,270
General charges	..	..	..	..	..	..	..	..	..	..	..	..	..	..	36,373	..	..	..	..	1·93	..
Totals ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	306,512	..	..	..	..	16·29	..
							WESTLAND SECTION.														
D	1	18	15	12,692	..	12,707	2,824	653	47	215	36	52	90	446	624	0·68	0·98	1·7	8·43	11·79	250
F and FA ..	6	20	78,974	45,837	3,204	128,015	44,696	4,791	252	1,171	1,093	154	1,423	3,101	5,771	2·05	0·29	2·67	5·81	10·82	1,459
LA	5	20	61,254	8,729	23,461	93,444	31,972	3,436	223	1,056	956	116	1,022	1,958	4,052	2·46	0·3	2·62	5·03	10·41	1,230
W and WA ..	5	18	88,968	18,873	994	108,835	53,605	4,361	245	1,543	1,626	154	1,724	2,418	5,922	3·59	0·34	3·8	5·33	13·06	1,200
WB ..	1	20	11,152	1,763	65	12,980	7,183	635	34	221	878	23	226	315	1,442	16·23	0·43	4·18	5·82	26·66	163
Totals ..	18	..	240,363	87,894	27,724	355,981	140,190	13,876	801	4,206	4,589	499	4,485	8,238	17,811	3·09	0·34	3·02	5·56	12·01	4,302
General charges	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2,671	..	..	..	..	1·8	..
Totals ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	20,482	..	..	..	..	13·81	..

RETURN No. 28—*continued.*

LOCOMOTIVE RETURNS for the Year ending 31st March, 1913—*continued.*

Type.	Number of Engines.	Average Speed—Miles per Hour.	Engine-Mileage.				Quantity of Stores.				Cost.					Cost per Engine-Mile in Pence.					Days in Steam.
			Detail.			Total.	Running.				Repairs.	Running.			Total.	Repairs.	Running.			Total.	
			Train.	Shunting and Empty.	Work-train.		Coal.	Oil.	Tallow.	Waste.	Wages and Material.	Stores.	Fuel.	Wages.		Wages and Material.	Stores.	Fuel.	Wages.		
WESTPORT SECTION.																					
							Cwt.	Qt.	lb.	lb.	£	£	£	£	£						
C	2	12	349	22,797	2,002	25,148	5,531	837	54	227	195	25	167	889	1,276	1·86	0·24	1·59	8·49	12·18	346
F and FA ..	4	15	22,648	37,758	5,588	65,994	16,558	2,090	113	658	1,040	64	500	1,958	3,562	3·78	0·23	1·82	7·12	12·95	957
WB ..	5	20	89,035	28,356	..	117,391	60,914	5,026	142	1,306	2,032	163	1,842	2,637	6,674	4·15	0·33	3·77	5·39	13·64	1,163
Totals ..	11	..	112,032	88,911	7,590	208,533	83,003	7,953	309	2,191	3,267	252	2,509	5,484	11,512	3·76	0·29	2·89	6·31	13·25	2,466
General charges	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1,938	..	..	..	..	2·23	..
Totals ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	13,450	..	..	..	..	15·48	..
NELSON SECTION.																					
D	1	18	1,613	1,092	8,702	11,407	1,308	220	9	48	74	8	72	187	341	1·56	0·17	1·51	3·93	7·17	180
F and FA ..	4	18	73,963	12,242	111	86,316	26,994	3,279	128	1,039	505	114	1,485	1,631	3,735	1·4	0·32	4·13	4·54	10·39	972
Totals ..	5	..	75,576	13,334	8,813	97,723	28,302	3,499	137	1,087	579	122	1,557	1,818	4,076	1·42	0·3	3·82	4·47	10·01	1,152
General charges	..	..	..	..	..	..	..	..	..	..	..	..	..	..	634	..	..	..	..	1·56	..
Totals ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	4,710	..	..	..	..	11·57	..
PICTON SECTION.																					
D	1	18	285	2,079	12,985	15,349	3,383	457	16	197	101	14	202	327	644	1·58	0·22	3·16	5·11	10·07	229
FA	2	18	40,881	7,392	40	48,313	20,241	2,070	41	453	563	62	1,201	894	2,720	2·8	0·31	5·96	4·44	13·51	446
G	4	18	44,193	25,238	6,313	75,744	27,909	3,200	86	955	642	97	1,663	1,584	3,986	2·03	0·31	5·27	5·02	12·63	1,000
Totals ..	7	..	85,359	34,709	19,338	139,406	51,533	5,727	143	1,605	1,306	173	3,066	2,805	7,350	2·25	0·29	5·28	4·83	12·65	1,675
General charges	..	..	..	..	..	..	..	..	..	..	..	..	..	..	501	..	..	..	..	0·86	..
Totals ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	7,851	..	..	..	..	13·51	..

RETURN No. 29.

SOUTH ISLAND MAIN LINE AND BRANCHES.

Return of Coal Traffic from Local Mines during the Year ending 31st March, 1913.

Mine.	1911-12.	1912-13.	Increase.	Decrease
	Tons.	Tons.	Tons.	Tons.
St. Helen's, White Cliffs	328	1,641	1,313	..
Homebush, Glentunnel	7,710	6,153	..	1,557
Mount Somers Coal Company, Mount Somers	2,181	2,976	795	..
Albury	164	67	..	97
Waihao Forks	..	112	112	..
Waihao Downs	..	43	43	..
Gibson's	5	..	..	5
Kurow	4	4	..	..
Peebles	..	22	22	..
Papakaio	8	20	12	..
Ngapara	74	247	173	..
Shag Point Coal Company, Bushey	1,337	1,355	18	..
McIntosh, A., Allandale	967	3,166	2,199	..
Allandale Coal Company, Bushey	3,001	..	..	3,001
Saddle Hill	37,225	37,063	..	162
Fernhill	20,017	20,727	710	..
Oturehua	..	50	50	..
Mosgiel	105	147	42	..
Taratu Mine, Lovell's Flat	5,377	13,217	7,840	..
Brook Bros., Bushey	604	509	..	95
Benhar	137	207	70	..
Stirling	..	37	37	..
Kaitangata	127,162	114,575	..	12,587
Bruce Coal Company, Milton	16,516	22,071	5,555	..
Dickison, Conical Hills	2,042	2,432	390	..
Knuckey and Junker (late Sneddon and Hamilton), Pukerau	70	26	..	44
Jones, Maitland	..	..	..	..
McSoar, W., Waikaka	..	..	..	..
Mason, W., Kingston Crossing	..	..	..	..
McDowall, Wairio	441	..	..	441
New Zealand Express Company, Gore	2,832	4,085	1,253	..
Sleeman, C. P., and Kyle, W., Mataura	915	763	..	152
Beattie, Coster, and Co., Mataura	5,451	4,924	..	527
Collieries Company, Mataura	9,265	11,049	1,784	..
Nightcaps Coal Company, Nightcaps	68,265	91,923	23,658	..
McKenzie, D., Wairio	3,943	2,515	..	1,428
Grant, J., Wairio	..	4	4	..
Moss Bros., Wairio	744	237	..	507
Wairio Coal Company	459	38	..	421
Dillon, Wairio	668	..	..	668
Clapp, Wairio	8	..	..	8
Bowden, Asher's	4	..	..	4
Clark, Wyndham	13	21	8	..
Mason and Johnston, Kingston Crossing	47	..	..	47
Lynch, Kingston Crossing	12	..	..	12
Hunt, Waikaka	5	..	..	5
Totals	318,106	342.426	46,088	21,768

RETURN No. 30.

SOUTH ISLAND MAIN LINE AND BRANCHES.

Return of the Number of Vessels discharged and loaded at the Ports of Lyttelton, Timaru, Oamaru, Port Chalmers, Dunedin, and Bluff, for the Year ending 31st March, 1913.

Port.	1911-12.	1912-13.	Increase.	Decrease.
	No.	No.	No.	No.
Discharged :—				
Lyttelton	1,942	1,974	32	..
Timaru	312	289	..	23
Oamaru	160	172	12	..
Port Chalmers	69	79	10	..
Dunedin	109	89	..	20
Bluff	223	224	1	..
Totals	2,815	2,827	12	..
Loaded :—				
Lyttelton	1,998	2,015	17	..
Timaru	261	279	18	..
Oamaru	176	160	..	16
Port Chalmers	54	44	..	10
Dunedin	35	30	..	5
Bluff	222	224	2	..
Totals	2,746	2,752	6	..

RETURN No. 31.

SOUTH ISLAND MAIN LINE AND BRANCHES.

Showing Mileage of Track in Main Line and Sidings open for Traffic on 31st March, 1913, on the South Island Main Line and Branches.

Line of Railway.	Main Line.				Branches.		Total Railway.		Sidings.						Total Equivalent of Single Track.	
	Single.		Double.						Main Line.		Branches.		Total.			
Christchurch Division :—	M.	ch.	M.	ch.	M.	ch.	M.	ch.	M.	ch.	M.	ch.	M.	ch.	M.	ch.
Main Line	211	57	17	72	..		229	49	91	76	..		91	76	321	45
Rangiora–Sheffield and Eyreton Junction – Bennett's	..		..		53	56	313	46	..		4	74	34	70	58	50
Waipara–Parnassus	..		..		44	1					4	43			48	44
Southbridge and Little River Branches	..		..		48	7					6	52			54	59
Springfield and White Cliffs Branches	..		..		69	6					7	59			76	65
Rakaia and Ashburton Forks Branch	..		..		22	20					3	14			25	34
Mount Somers Branch ..	..		..		27	36					1	75			29	31
Albury Branch	..		..		36	13					3	4			39	17
Waimate Branch	..		..		12	67					2	69			15	56
Totals, Christchurch Division	211	57	17	72	313	46	543	15	91	76	34	70	126	66	670	1
Dunedin Division :—																
Main Line	165	40	8	6	..		173	46	71	70	..		71	70	245	36
Duntroon Branch	..		..		37	41	278	2	..		3	12	29	45	40	53
Oamaru–Breakwater Branch ..	..		..		0	63					1	62			2	45
Ngapara & Livingstone Branches	..		..		27	4					2	17			29	21
Waihemo Branch	..		..		8	65					0	63			9	48
Port Chalmers Branch ..	..		..		1	26					3	65			5	11
Walton Park Branch ..	..		..		2	49					0	79			3	48
Fernhill Branch	..		..		1	57					0	24			2	1
Otago Central Railway ..	..		..		134	51					10	35			145	6
Outram Branch	..		..		9	0					0	63			9	63
Lawrence Branch	..		..		29	32					2	51			32	3
Catlin's River Branch ..	..		..		25	14					2	54			27	68
Totals, Dunedin Division ..	165	40	8	6	278	2	451	48	71	70	29	45	101	35	553	3
Invercargill Division :—																
Main Line	82	41	..		..		82	41	33	36	..		33	36	115	77
Tapanui Branch	..		..		26	21	315	67	..		2	61	40	61	29	2
Waimea Plains Branch ..	..		..		36	41					3	22			39	63
Switzer's Branch	..		..		13	67					2	3			15	70
Waikaka Branch	..		..		12	57					2	3			14	60
Wyndham Branch	..		..		9	35					1	0			10	35
Seaward Bush Branch ..	..		..		33	65					3	3			36	68
Kingston Branch	..		..		87	0					11	9			98	9
Makarewa – Orepuki Branch ..	..		..		48	23					9	35			57	58
Thornbury–Wairio and Wairio–Nightcaps Branches	..		..		24	51					3	69			28	40
Forest Hill Railway ..	..		..		12	66					1	13			13	79
Lumsden – Mararoa Branch ..	..		..		10	41					1	3			11	44
Totals, Invercargill Division	82	41	..		315	67	398	28	33	36	40	61	74	17	472	45
Grand Totals—Whole Line ..	459	58	25	78	907	35	1,393	11	197	22	105	16	302	38	1,695	49

RETURN No. 32.

STATEMENT of ALTERATIONS in and ADDITIONS to SCALE of CHARGES during the Year ended 31st March, 1913.

PART I.—PASSENGERS.

GENERAL FARES AND REGULATIONS.

Volunteer tickets: Regulation cancelled.

Official season tickets: Regulation cancelled.

Special trains for Government Departments: Regulation cancelled.

Ordinary tickets: Clause *re* completion of journey by first available train after date of expiry when no train running on that day removed.

Alternative routes: Regulation amended so as to exclude sectional season tickets.

Booking fee: Regulation amended in order to provide for children under twelve years of age being charged half-rates.

Family season tickets: Regulation amended.

Reserved carriages: Regulation amended in order to provide for compartment being reserved for Judges and members of the Arbitration Court.

Excursion trains: Regulation amended.

Concession tickets: Clause inserted providing for the purchase of concession tickets half an hour before the departure of train by which they are intended to be used.

LOCAL FARES AND REGULATIONS.

Workers' weekly tickets to apply from Napier to Hastings.

Kawakawa Section: Regulations removed.

Auckland Section: Regulation *re* conveyance of funerals from Auckland, Newmarket, and Mount Eden to Waikumete Cemetery removed.

PART II.—LUGGAGE, PARCELS, ETC.

Luggage: Regulation inserted providing for checking of passengers' luggage for the rail journey between officered stations on the North and South Island main lines and branches, including the journey by ferry steamers between Wellington and Lyttelton.

Theatrical companies' luggage: Regulation amended.

Bicycles: Regulation amended.

Coin, bullion, &c.: New rates provided for the conveyance at railway risk and when accompanied by passengers.

Horses: Double rates to be charged on each horse where a UG wagon is ordered for conveyance of horses by ordinary trains and not fully loaded.

Motor-cars: Regulation inserted for conveyance of motor wagons and buses and motors not to be accepted for carriage by rail when charged with any inflammable liquid.

Dogs: Regulation amended.

Funerals from Auckland, Newmarket, and Mount Eden to Waikumete Cemetery: Charges inserted for carriage of corpses.

Whangarei Section: Local rates removed.

PART III.—GOODS REGULATIONS.

Class F: Charges inserted for four-wheeled wagons (LA excepted) loaded up to the limit where the carrying-capacity is marked thereon.

Private stores and sidings: Clause *re* weight of goods delivered at and received from private sidings amended.

PART IV.—GOODS: LOCAL RATES.

Kaihu Section—
- Rate inserted on timber from Taita to Dargaville.

Auckland District—
- New schedule of rates provided for through booking of goods between stations in the Auckland District and ports on the Manakau Harbour.
- Rate inserted for timber from Wimiha to Mount Eden, Auckland, Onehunga Wharf, and intermediate stations.

Gisborne Section—
- Rate on white-pine timber from Te Karaka to Gisborne provided.

Westland Section—
- Rate provided for timber hauled between Hokitika Station and the timber-skids for local delivery or for shipment at Hokitika.
- Rates inserted on coal from Stillwater to Greymouth.
- Rates inserted on coke from Granity to Westport.

South Island main line and branches
- Rate on pelts from Fairfield to Woolston, Pareora, and Belfast, and from Pareora to Belfast and Woolston, removed.
- Rate on fat from Mataura to Wallacetown removed.
- Charges on goods between Invercargill Jetty and Railway-station removed.
- Rate on bricks, tiles, and clay from Buxton's to Invercargill removed.

PART V.—CLASSIFICATION.

	Class.
Inserted—	
Acorns, packed. Rate and a half (not to exceed Class D)	E
Aeroplanes. Minimum charge as for 1 ton for four-wheeled wagon, 2 tons for bogie wagon. Owners' risk. Special goods	A
Bark-refuse for stable purposes	P
Boot-polish	B
Brasses for axle-boxes	B
Boxes (soap), in pieces, packed in crates, not returned empties. Half-rates	B
Butter-wrappers, packed	D
Butter, concentrated milk, and frozen cream, in mixed consignments in lots of not less than 10 cwt. from local factories. Rate and a half	E
Calf-meal, not otherwise specified. Owners' risk	D
Casein curd, packed. Owners' risk	E
Clay pigeons. Owners' risk	B
Concrete drinking-troughs. Owners' risk. Special goods	N
Cancrete slabs for paving dairies	N
Cones, packed. Owners' risk	C
Cornflour, in bulk	C
Coraline, packed	B
Dinghys (under 10 ft.), minimum as for 10 ft. Owners' risk	A
Dynamos. Owners' risk. Special goods	B
Earthenware building-blocks. Owners' risk	P
Empties : Returned fish-packages	Free
Energine. Owners' risk. Dangerous. Rate and a half	A
Eruptite. Owners' risk. Dangerous. Double rate	A
Floatine. Owners' risk	C
Fleshings, packed. Owners' risk	N
Gates, house and garden, New Zealand manufacture. Owners' risk	D
Guano, loose. Owners' risk	N
Hermatite, packed. Owners' risk	B
Ice, unpacked. Owners' risk	A
Marble for manufacture of gravestones. Owners' risk. Special goods	D
Military camp equipment (exclusive of ammunition or explosives of any description), guns, gun-carriages, and wagons. Owners' risk	C
Motor-cars in cases. Minimum 15 cwt. per truck. Owners' risk. Special goods	A
Pebbles, imported for mining purposes	N
Parsnips. Owners' risk	F
Pipes, wooden. Minimum quantity 2 tons per four-wheeled truck, 5 tons per bogie truck. (Any less quantity will be charged as such minimum or at the classified rates for Class B)	C
Poles, ferro-concrete, New Zealand manufacture. Owners' risk	N
Rice-flour	C
Rubber, second-hand or waste	C
Sage and thyme, as vegetables.	
Saw-benches. Owners' risk	A
Slag-wool. Owners' risk	N
Sleepers, railway and tramway, imported. Owners' risk. Rate and a half	Q
Soda, nitrate of. Owners' risk	E
Stags' heads, mounted or unmounted. Owners' risk. Rate and a quarter. As parcels. See Part II.	
Stationery, New Zealand manufacture, consigned direct from factory. Owners' risk	B
Sucrosine, not otherwise specified. Owners' risk	D
Sulphur, packed for acid-making. Owners' risk	Q
Tiles, plain, flooring	D
Deleted—	
Timber, Australian and Tasmanian. Owners' risk. Rate and a half	K
Inserted—	
Timber, imported. Owners' risk. Rate and a half	K
Tobacco-dust for use as a blight-destroyer. Owners' risk	D
Tags for frozen meat	D
Toys, packed, New Zealand manufacture. Owners' risk. Special goods	A
Typewriters, packed in cases or crates. Owners' risk. Special goods	A
Typewriters, loose. Owners' risk. Special goods. Rate and a quarter. As parcels. See Part II.	
Valonia, packed. Owners' risk	D
Vats, cream, freezing. Owners' risk. Special goods	C
Veneers, packed in cases, crates or bundles, not otherwise specified. Owners' risk	B
Wrappers, packed, butter	D
Wyandotte, packed	B

PART VI.—WHARVES.

Ships working overtime : Regulation amended.

Whangarei Railway wharves : Charges for use of wharves amended.

Auckland Railway Wharf : Charges for use of wharf removed.

Nelson Wharf : Rates and charges for use of wharf amended.

Port Chalmers wharves : Charges inserted for vessels attaching lines to the railway wharves when proceeding to or from the docks.

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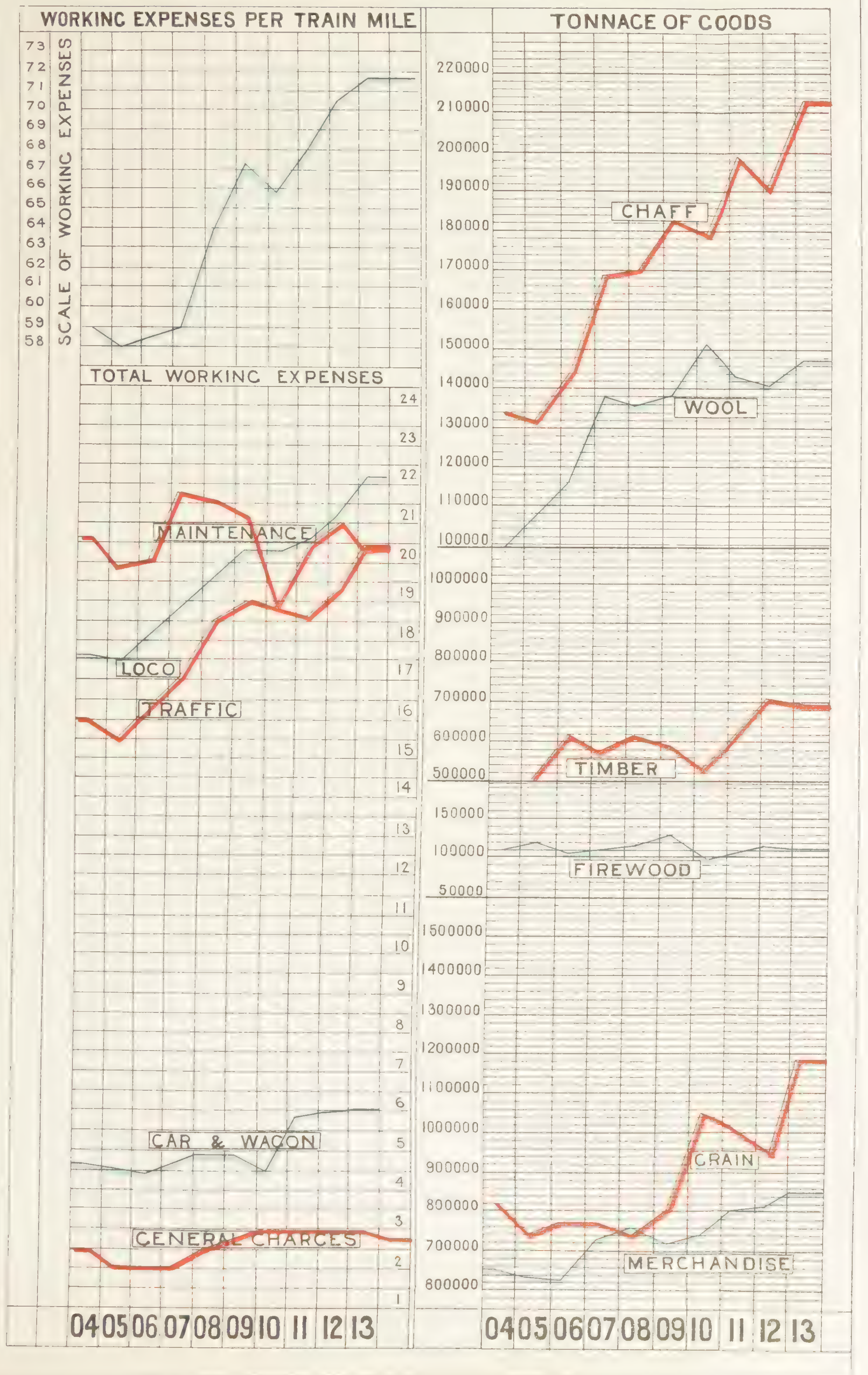
NEW ZEALAND GOVERNMENT RAILWAYS



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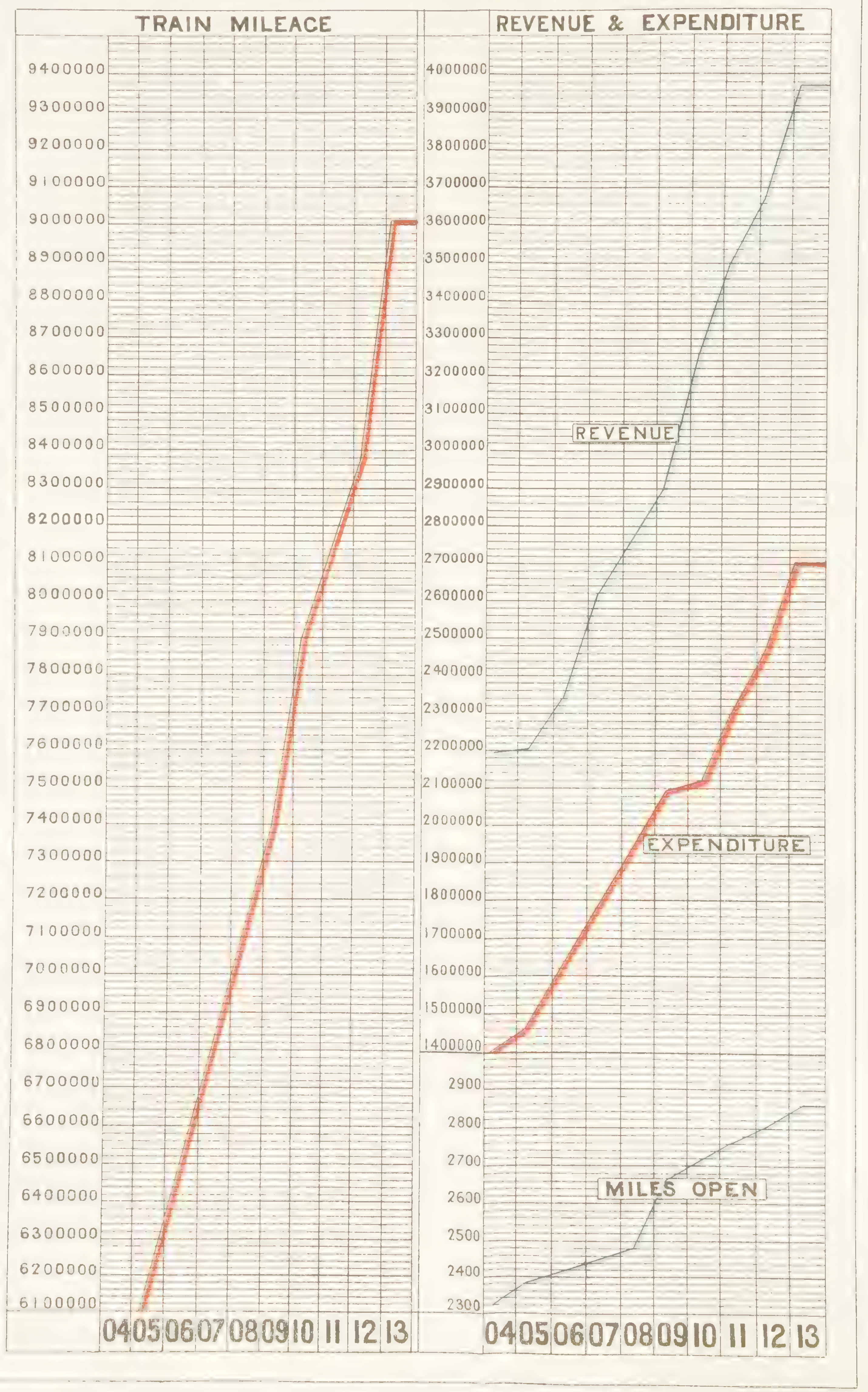

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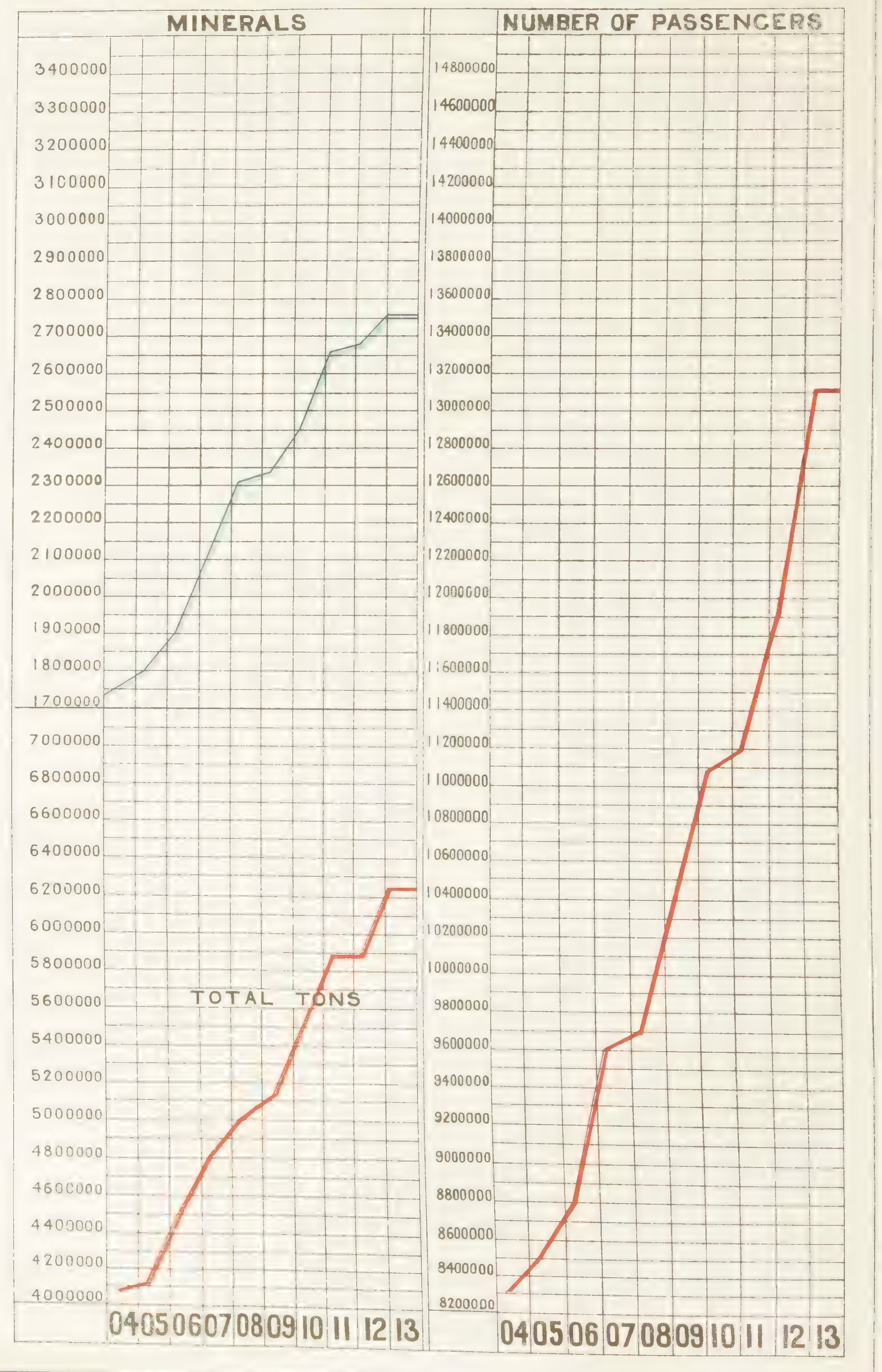

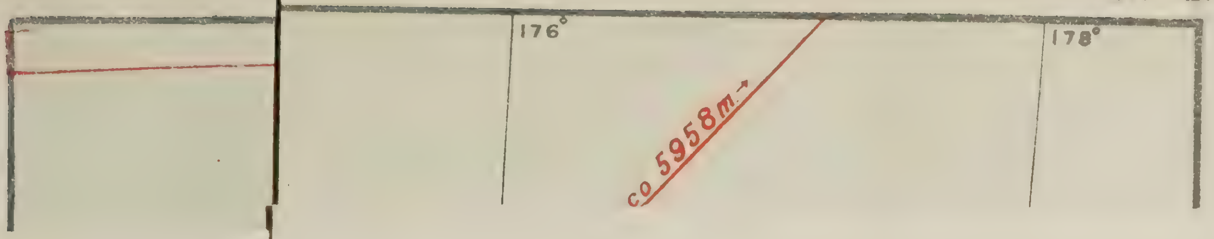
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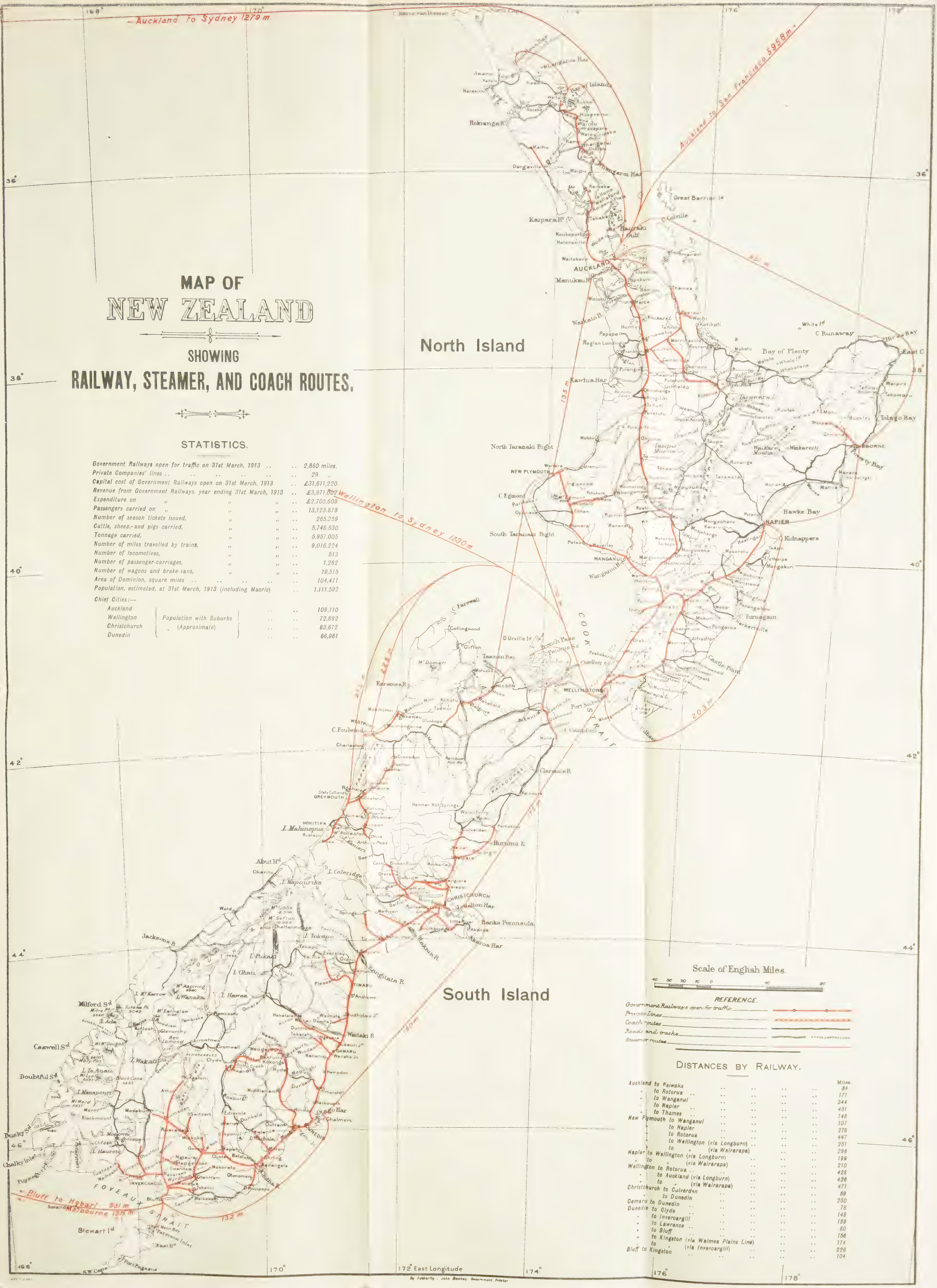

MAP OF NEW ZEALAND

SHOWING

RAILWAY, STEAMER, AND COACH ROUTES.

STATISTICS.

Government Railways open for traffic on 31st March, 1913 ..	..	2,860 miles.
Private Companies' lines	..	29 „
Capital cost of Government Railways open on 31st March, 1913	..	£31,611,220
Revenue from Government Railways, year ending 31st March, 1913	..	£3,971,002
Expenditure on „ „ „	..	£2,705,609
Passengers carried on „ „ „	..	13,123,879
Number of season tickets issued, „ „	..	265,259
Cattle, sheep, and pigs carried, „ „	..	5,746,530
Tonnage carried, „ „	..	5,957,005
Number of miles travelled by trains, „ „	..	9,016,224
Number of locomotives, „ „	..	513
Number of passenger-carriages, „ „	..	1,282
Number of wagons and brake-vans, „ „	..	19,515
Area of Dominion, square miles	..	104,471
Population, estimated, at 31st March, 1913 (including Maoris)	..	1,111,592
Chief Cities:—		
Auckland	Population with Suburbs (Approximate)	109,110
Wellington		72,892
Christchurch		83,672
Dunedin		66,981

REFERENCE.

Government Railways open for traffic	
Private Lines	
Coach routes	
Roads and tracks	
Steamer routes	

DISTANCES BY RAILWAY.

	Miles.
Auckland to Kaiwaka	84
„ to Rotorua ..	171
„ to Wanganui	344
„ to Napier ..	451
„ to Thames ..	148
New Plymouth to Wanganui	107
„ to Napier	276
„ to Rotorua	447
„ to Wellington (via Longburn) ..	251
„ to „ (via Wairarapa)	296
Napier to Wellington (via Longburn)	199
„ to „ (via Wairarapa)	210
Wellington to Rotorua ..	428
„ to Auckland (via Longburn)	426
„ to „ (via Wairarapa)	471
Christchurch to Culverden	69
„ to Dunedin	230
Oamaru to Dunedin ..	78
Dunedin to Clyde ..	148
„ to Invercargill	139
„ to Lawrence ..	60
„ to Bluff ..	156
„ to Kingston (via Waimea Plains Line)	174
„ to „ (via Invercargill)	226
Bluff to Kingston ..	104

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NEW ZEALAND.

MEMBERS OF THE RAILWAY DEPARTMENT.

LIST SETTING OUT IN ORDER OF CLASSIFICATION THE NAME, STATUS, AND PAY OF EACH MEMBER AND PROBATIONER, AND THE NUMBER OF YEARS HE HAS BEEN IN THE SERVICE OF THE DEPARTMENT ON 1st APRIL, 1913.

Presented to Parliament in accordance with Section 50 of the Government Railways Act, 1908.

RAILWAY DEPARTMENT CLASSIFICATION, 1913.

Prog. No.	Name.	Classification.				Service			Remarks.
		Designation.	Grade.	Subgrade.	Salary.	Since last appointed.	Prior to Date last appointed.	For Superannuation Purposes.	
					FIRST DIVISION.				
					SUBDIVISION I.				
					Class 1: General Management.				
					£ s. d.	Y. M.	Y. M.	Y. M.	
	Ronayne, T.	General Manager ..	..	..	1,250 0 0 per ann.	37 5	..	37 5	
	McVilly, R. W. ..	Chief Clerk	..	..	800 0 0 "	33 5	..	33 5	
					Class 2: Branch Management.				
	Beattie, A. L... ..	Chief Mechanical Engineer	..	..	900 0 0 per ann.	35 6	..	35 6	
	Buxton, H.	Chief Traffic Manager ..	..	..	900 0 0 "	38 7	..	38 7	
	Burnett, J.	Chief Engineer ..	..	..	900 0 0 "	35 8	..	40 9	
	Davidson, H.	Chief Accountant ..	..	..	750 0 0 "	36 2	..	36 2	
	Baxter, H.	Comptroller of Stores ..	..	..	600 0 0 "	36 3	1 9	38 0	
					SUBDIVISION II.				
					Salaried Staff not otherwise specified.				
1	MacLean, F. W. ..	Inspecting Engineer ..	1	4	700 0 0 per ann.	28 9	..	28 9	
2	Jackson, H. H. ..	Locomotive Engineer ..	1	2	650 0 0 "	30 11	5 1	36 5	
3	Whitcombe, S. F. ..	Traffic Superintendent ..	1	2	650 0 0 "	37 2	..	37 2	
4	Piper, C. A.	" ..	1	2	650 0 0 "	40 10	..	40 10	
1	Wynne, H. J... ..	Signal and Electrical Engineer	2	4	600 0 0 "	13 0	..	13 0	
2	McIntosh, D. T. ..	District Engineer ..	2	3	575 0 0 "	31 7	..	31 7	
3	Macandrew, H. ..	" ..	2	3	575 0 0 "	16 2	..	33 8	
1	Waite, T. W.	District Traffic Manager	3	4	525 0 0 "	31 2	0 10	32 0	
2	Biss, C. H.	District Engineer ..	3	4	525 0 0 "	29 1	..	29 1	
3	Troup, G. A.	Office Engineer ..	3	4	525 0 0 "	26 7	..	26 7	
4	Pearson, G. A. ..	Locomotive Engineer ..	3	4	525 0 0 "	24 2	1 8	25 10	
5	Stringleman, W. J. ..	District Traffic Manager	3	4	525 0 0 "	35 2	..	35 2	
6	Koch, A. C.	District Engineer ..	3	4	525 0 0 "	13 8	..	35 2	
7	McCredie, A. J. ..	" ..	3	4	525 0 0 "	27 10	..	27 10	
8	Armstrong, J. E. ..	District Traffic Manager	3	3	505 0 0 "	28 9	0 2	29 0	
9	Jones, F. J.	District Engineer ..	3	3	505 0 0 "	23 6	..	23 6	
10	Brebner, T. W. ..	District Traffic Manager	3	3	505 0 0 "	39 5	..	39 5	
11	Duncan, A.	"	3	2	485 0 0 "	34 11	..	34 11	
12	Bowles, W.	"	3	2	485 0 0 "	34 10	..	34 10	
13	Richardson, G. E. ..	Locomotive Engineer ..	3	1	470 0 0 "	29 9	..	29 9	
14	Widdop, F. C. ..	District Engineer ..	3	1	470 0 0 "	21 7	..	21 7	
1	Payne, P. L.	District Traffic Manager	4	1	420 0 0 "	35 11	..	35 11	
2	Bevin, J.	"	4	1	420 0 0 "	36 2	..	36 2	
3	Hicks, W. P.	Chief Clerk (Maintenance Branch)	4	1	420 0 0 "	35 1	..	35 1	
4	Kelly, J. P.	Chief Clerk (Locomotive Branch)	4	1	420 0 0 "	37 7	..	37 7	

RAILWAY DEPARTMENT CLASSIFICATION, 1913—*continued.*

FIRST DIVISION—*continued.*

SUBDIVISION II—*continued.*

Salaried Staff not otherwise specified—continued.

Prog. No.	Name.	Classification.				Service			Remarks.
		Designation.	Grade.	Subgrade.	Salary.	Since last appointed.	Prior to Date last appointed.	For Superannuation Purposes.	
					£ s. d.	Y. M.	Y. M.	Y. M.	
5	Murison, F. T.	Locomotive Engineer	4	1	420 0 0 per ann.	27 7	..	27 7	
6	Munro, D.	Chief Traffic Auditor	4	1	420 0 0 „	35 8	..	35 8	
7	Pye-Smith, R.	Chief Draftsman	4	1	420 0 0 „	22 0	..	22 0	
8	Evans, S. P.	Locomotive Engineer	4	1	420 0 0 „	23 1	5 0	23 1	
9	Rowe, M. C.	Chief Clerk (Stores Br'ch)	4	1	420 0 0 „	35 6	..	35 6	
10	Gillon, E. E.	Assistant Loco. Engineer and Workshop Manager	4	1	420 0 0 „	28 8	..	28 8	
11	Brownlee, G.	Clerk	4	1	420 0 0 „	35 1	..	35 1	
12	Benzoni, C. M.	District Engineer	4	1	420 0 0 „	21 0	..	21 0	
13	Lowe, J. K.	„	4	1	420 0 0 „	22 5	..	22 5	
1	McCarthy, J. F.	Workshop Manager	5	3	400 0 0 „	28 3	2 0	28 3	
2	Davies, J. H.	Chief Clerk (Accountant's Branch)	5	3	400 0 0 „	35 8	..	35 8	
3	Nichols, J. W.	Boiler Inspector	5	3	400 0 0 „	31 9	..	31 9	
4	Wallace, D.	Goods Agent	5	3	400 0 0 „	17 10	..	17 10	
5	Mackenzie, A.	Locomotive Foreman	5	3	400 0 0 „	37 2	..	37 2	
6	Cole, E. M.	Goods Agent	5	3	400 0 0 „	35 0	..	35 0	
7	Cook, A. W. J.	Clerk	5	3	400 0 0 „	4 4	27 8	32 0	
8	Mouat, A. W.	Traffic Clerk	5	3	400 0 0 „	4 4	18 2	22 6	
9	Bargh, C. T.	Locomotive Inspector	5	3	400 0 0 „	4 4	15 6	19 10	
10	Hislop, R.	Stationmaster	5	3	400 0 0 „	34 5	..	34 5	
11	O'Loughlen, A. H.	Goods Agent	5	3	400 0 0 „	35 1	..	35 1	
12	Macdonald, J.	Stationmaster	5	3	400 0 0 „	36 3	..	36 3	
13	Sword, W.	District Manager	5	2	385 0 0 „	36 0	..	36 0	
14	Mellor, A. H.	Goods Agent	5	2	385 0 0 „	29 2	0 2	29 4	
15	Ridler, W. S.	Staff Clerk	5	2	385 0 0 „	32 5	..	32 5	
16	Fahy, J. T.	Electrician	5	2	385 0 0 „	10 9	..	33 11	
17	Robieson, G. A. C.	Chief Clerk (Traffic Branch)	5	2	385 0 0 „	33 3	..	33 3	
18	Harris, A. K.	Traffic Clerk	5	1	370 0 0 „	28 5	..	28 5	
19	Morgan, A. W.	Stationmaster	5	1	370 0 0 „	33 5	..	33 5	
20	Matheson, J. P.	„	5	1	370 0 0 „	26 2	1 3	27 5	
21	Williams, W. P.	„	5	1	370 0 0 „	35 8	..	35 8	
22	Hunter, W.	Locomotive Foreman and Supervisor of Lake Steamers	5	1	370 0 0 „	36 3	1 6	36 3	
23	Young, J.	Land Officer	5	1	370 0 0 „	35 3	..	35 3	
24	Besant, J.	Draftsman	5	1	370 0 0 „	23 2	5 1	28 3	
25	Alabaster, A. H.	Inspector of Bridge Construction	5	1	370 0 0 „	14 5	1 9	16 2	
26	Bowles, G.	Locomotive Inspector	5	1	370 0 0 „	37 8	..	37 8	
27	Haskins, E. L. W.	Locomotive Engineer	5	1	370 0 0 „	35 6	..	35 6	
1	Duncan, P. A.	Stationmaster	6	3	355 0 0 „	35 10	..	38 8	
2	Smith, H. C.	„	6	3	355 0 0 „	39 2	..	39 2	
3	Hall, J.	Foreman of Works	6	3	355 0 0 „	38 7	..	38 7	
4	Curtis, S. P.	Clerk	6	3	355 0 0 „	35 10	..	42 9	
5	Burnett, G.	„	6	3	355 0 0 „	34 5	..	34 5	
6	McKay, D.	Foreman of Works	6	3	355 0 0 „	35 2	..	35 2	
7	Rolfe, W. F.	Stationmaster	6	3	355 0 0 „	39 7	..	39 7	
8	Meachen, T.	Locomotive Foreman	6	3	355 0 0 „	37 10	..	37 10	
9	McMaster, G. H.	Clerk	6	3	355 0 0 „	33 1	..	33 1	
10	Loveday, C.	„	6	3	355 0 0 „	37 5	..	37 5	
11	Dobbie, E.	Stationmaster	6	3	355 0 0 „	34 9	..	34 9	
12	Williams, W.	Stores Audit Inspector	6	3	355 0 0 „	31 6	0 7	32 1	
13	Hutchinson, J. S.	Storekeeper	6	3	355 0 0 „	29 9	..	29 9	
14	McCartney, G.	Clerk	6	3	355 0 0 „	30 6	..	30 6	
15	Wood, W. A.	Traffic Inspector	6	3	355 0 0 „	27 0	3 1	27 2	
16	Aekins, R.	Clerk	6	3	355 0 0 „	29 0	1 1	30 2	
17	McNair, J.	Assistant Engineer	6	3	355 0 0 „	4 4	2 10	7 2	
18	Weir, G.	Sawmill Manager	6	3	355 0 0 „	4 0	..	8 2	
19	Dawson, E. A.	Traffic Inspector	6	2	345 0 0 „	29 0	..	29 0	
20	Bean, P. E.	Stationmaster	6	1	330 0 0 „	36 6	..	36 6	
21	Day, J. L.	Clerk	6	2	345 0 0 „	30 10	0 7	31 6	
22	Couper, T.	Traffic Clerk	6	2	345 0 0 „	31 4	..	32 2	
23	Carson, J.	Workshop Manager	6	2	345 0 0 „	30 3	..	30 3	
24	Smith, J.	Stationmaster	6	1	330 0 0 „	38 1	..	38 1	
25	Williams, H.	Stationmaster-in-charge	6	1	330 0 0 „	29 2	..	29 2	
26	Cheeseman, J.	Signal and Interlocking Inspector	6	1	330 0 0 „	12 5	..	12 5	
27	Brownell, T. J.	Traffic Inspector	6	1	330 0 0 „	36 3	..	36 3	
28	Barclay, G.	Traffic Clerk	6	1	330 0 0 „	33 8	..	33 8	
29	Mitchell, J. B.	„	6	1	330 0 0 „	29 2	1 0	30 2	
30	Falla, G.	Stationmaster	6	1	330 0 0 „	33 8	..	33 8	
31	Edwards, T. S.	Stationmaster-in-charge	6	1	330 0 0 „	36 9	..	36 9	
32	Batten, C.	Clerk	6	1	330 0 0 „	34 8	..	34 8	

RAILWAY DEPARTMENT CLASSIFICATION, 1913—*continued.*

FIRST DIVISION—*continued.*

SUBDIVISION II—*continued.*

Salaried Staff not otherwise specified—continued.

Prog. No.	Name.	Classification.				Service			Remarks.
		Designation.	Grade.	Sub-grade.	Salary.	Since last appointed.	Prior to Date last appointed.	For Superannuation Purposes.	
					£ s. d.	Y. M.	Y. M.	Y. M.	
33	Arthur, A. M... ..	Stationmaster-in-charge	6	1	330 0 0 per ann.	37 11	..	37 11	
34	Blackburn, A. H. ..	Clerk	6	1	330 0 0 „	33 8	..	33 8	
35	Duff, J. O.	„	6	1	330 0 0 „	30 4	0 4	30 8	
36	Cameron, E.	„	6	1	330 0 0 „	29 5	2 0	31 5	
37	Watson, W. J. ..	Workshop Foreman ..	6	1	330 0 0 „	23 2	8 1	31 3	
38	Hamann, L. C. E. ..	Clerk	6	1	330 0 0 „	28 11	0 4	29 3	
39	Grant, F. A.	Traffic Clerk	6	1	330 0 0 „	28 4	0 2	28 6	
1	Pollock, A.	Clerk	7	3	315 0 0 „	4 4	21 10	26 2	
2	Wilson, E. G... ..	Stationmaster ..	7	3	315 0 0 „	38 3	..	38 3	
3	Hill, C. F.	„ ..	7	3	315 0 0 „	29 1	..	29 1	
4	Faris, I.	Audit Inspector ..	7	3	315 0 0 „	31 0	1 3	33 2	
5	Henderson, J. T. ..	Workshop Foreman ..	7	3	315 0 0 „	27 2	..	27 2	
6	Gray, J.	Traffic Inspector ..	7	3	315 0 0 „	34 1	..	34 1	
7	Couch, P.	Clerk	7	3	315 0 0 „	35 2	..	35 2	
8	Souper, J. T.	Refreshment-car Supervisor	7	3	315 0 0 „	9 5	..	9 5	
9	Paterson, L.	Car and Wagon Inspector	7	3	315 0 0 „	27 0	..	27 0	
10	Simpson, R.	„	7	3	315 0 0 „	23 3	10 10	23 3	
11	Bennett, J.	Inspector, Perm'ent-way	7	3	315 0 0 „	34 3	..	34 3	
12	Watson, A.	Stationmaster ..	7	3	315 0 0 „	34 3	..	34 3	
13	Pepperell, L. P. ..	Clerk	7	3	315 0 0 „	35 11	..	35 11	
14	Peach, C.	„	7	3	315 0 0 „	33 9	..	33 9	
15	Cowan, C. J.	Stationmaster ..	7	3	315 0 0 „	35 7	..	35 7	
16	Norie, G. H.	Storekeeper	7	3	315 0 0 „	30 6	0 8	31 2	
17	Kennedy, A.	Clerk	7	3	315 0 0 „	33 9	..	33 9	
18	Parson, F. J.	„	7	3	315 0 0 „	31 3	..	31 3	
19	Day, C. F.	Stationmaster ..	7	3	315 0 0 „	31 1	..	31 1	
20	Angus, M.	Clerk	7	3	315 0 0 „	29 3	0 5	29 8	
21	Andrews, G.	„	7	3	315 0 0 „	30 5	..	30 5	
22	Thomas, H. T. ..	Storekeeper	7	3	315 0 0 „	29 5	..	29 5	
23	Bennett, H.	Relieving Officer ..	7	3	315 0 0 „	34 1	..	34 1	
24	Kydd, W.	Workshops Foreman ..	7	3	315 0 0 „	29 3	..	29 3	
25	Boswell, J. R... ..	Stationmaster ..	7	3	315 0 0 „	33 7	..	33 7	
26	Hislop, A.	Locomotive Foreman ..	7	3	315 0 0 „	35 3	..	35 3	
27	Johnston, R.	Workshop Foreman ..	7	3	315 0 0 „	27 3	1 0	27 3	
28	Ray, W.	Inspector, Perm'ent-way	7	3	315 0 0 „	27 6	..	27 6	
29	Sanders, S.	„ „	7	3	315 0 0 „	31 5	1 3	31 5	
30	Northcott, J.	„ „	7	3	315 0 0 „	28 6	..	28 6	
31	Lee, J.	„ „	7	3	315 0 0 „	31 6	..	31 6	
32	Kane, J.	Foreman of Works ..	7	3	315 0 0 „	31 1	..	31 1	
33	Firth, J.	Clerk	7	3	315 0 0 „	32 0	..	34 2	
34	Arnold, F. W... ..	„	7	3	315 0 0 „	34 9	..	34 9	
35	Bathgate, C.	Foreman of Works ..	7	3	315 0 0 „	25 10	0 9	25 10	
36	Faris, G. P.	Clerk	7	3	315 0 0 „	30 3	..	30 3	
37	Appleby, J. T... ..	Stationmaster ..	7	3	315 0 0 „	28 8	..	28 8	
38	Mooney, H. F. ..	„ ..	7	3	315 0 0 „	30 5	0 5	30 10	
39	Young, J.	„ ..	7	3	315 0 0 „	29 4	0 6	29 10	
40	Kerr, W.	„ ..	7	3	315 0 0 „	31 6	..	31 6	
41	Naughton, O. E. ..	Clerk	7	2	300 0 0 „	30 0	0 10	30 10	
42	Ennis, A. T.	Relieving Officer ..	7	2	300 0 0 „	29 5	0 7	30 0	
43	Foweraker, T. A. ..	Traffic Inspector ..	7	2	300 0 0 „	30 3	..	30 3	
44	Davy, E.	Clerk	7	2	300 0 0 „	27 4	..	35 8	
45	Smith, P. C.	Workshop Foreman ..	7	2	300 0 0 „	34 3	..	34 3	
46	Schofield, R. J. W. ..	Stationmaster ..	7	2	300 0 0 „	35 6	..	35 6	
47	Allan, T. B.	Car and Wagon Inspector	7	2	300 0 0 „	34 5	..	34 5	
48	Mather, W.	Foreman of Works ..	7	2	300 0 0 „	38 3	..	38 3	
49	Couper, J.	Stationmaster ..	7	1	285 0 0 „	27 3	1 8	28 11	
50	Nicholson, E. R. ..	Clerk	7	2	300 0 0 „	28 7	0 9	29 4	
51	Nicolson, R. H. ..	Stationmaster ..	7	2	300 0 0 „	30 8	..	30 8	
52	Taylor, J. R.	Clerk	7	1	285 0 0 „	30 10	..	30 10	
53	Turner, I. W... ..	Stationmaster ..	7	2	300 0 0 „	29 9	..	29 9	
54	Jeffares, I. H. B. ..	Traffic Clerk	7	2	300 0 0 „	28 4	..	28 4	
55	Jenkinson, S. H. ..	Draftsman	7	2	300 0 0 „	6 7	5 2	7 11	
56	Pedler, G.	Traffic Inspector ..	7	1	285 0 0 „	30 10	..	30 10	
57	Spindeler, W. F. ..	Stationmaster ..	7	2	300 0 0 „	28 2	..	28 2	
58	Andrews, S.	Clerk	7	2	300 0 0 „	25 10	1 2	27 0	
59	Isaacs, R. M... ..	„	7	2	300 0 0 „	26 10	..	26 10	
60	Scott, W.	Locomotive Foreman ..	7	2	300 0 0 „	36 0	..	36 0	
61	Jeffreys, C. T... ..	Assistant Engineer ..	7	2	300 0 0 „	24 5	..	24 5	
62	Bagge, W. R. B. ..	„ ..	7	2	300 0 0 „	16 5	1 0	16 8	
63	Turner, G. A... ..	Car and Wagon Inspector	7	1	285 0 0 „	30 4	6 5	30 4	
64	Campbell, J. B. ..	Stationmaster ..	7	1	285 0 0 „	31 4	1 1	32 5	
65	Fleming, E. J. ..	Audit Inspector ..	7	1	285 0 0 „	29 9	0 1	29 10	
66	Hanning, J.	Stationmaster ..	7	1	285 0 0 „	30 10	0 6	31 4	
67	Robertson, A. J. ..	„ ..	7	1	285 0 0 „	31 5	..	31 5	

RAILWAY DEPARTMENT CLASSIFICATION, 1913—*continued.*

FIRST DIVISION—*continued.*

SUBDIVISION II—*continued.*

Salaried Staff not otherwise specified—continued.

Prog. No.	Name.	Classification.				Service			Remarks.
		Designation.	Grade.	Subgrade.	Salary.	Since last appointed.	Prior to Date last appointed.	For Superannuation Purposes.	
					£ s. d.	Y. M.	Y. M.	Y. M.	
68	Smith, C. S.	Stationmaster	7	1	285 0 0 per ann.	30 2	..	30 2	
69	Mercer, H.	〃	7	1	285 0 0 〃	29 0	0 2	29 2	
70	Weir, J. J.	Audit Inspector	7	1	285 0 0 〃	26 11	..	26 11	
71	Laing, H. W.	Stationmaster	7	1	285 0 0 〃	26 9	..	26 9	
72	Rudman, A. H.	Clerk	7	1	285 0 0 〃	24 5	6 8	31 1	
73	Parsons, G. A.	Audit Inspector	7	1	285 0 0 〃	30 0	..	30 0	
74	Gordon, J.	Inspector, Perm'ent-way	7	1	285 0 0 〃	27 4	..	27 4	
75	Treweek, F.	〃 〃	7	1	285 0 0 〃	31 4	..	31 4	
76	Herlund, C.	Foreman of Works	7	1	285 0 0 〃	29 7	..	29 7	
77	Westphal, W. H.	Inspector, Perm'ent-way	7	1	285 0 0 〃	24 0	0 8	24 8	
78	Austin, W.	Workshop Foreman	7	1	285 0 0 〃	28 6	..	28 6	
79	Kent, R. S.	Assistant Engineer	7	1	285 0 0 〃	16 11	..	16 11	
80	Davidson, W. R.	〃	7	1	285 0 0 〃	14 10	..	14 10	
81	Laurie, F. A.	Workshop Foreman	7	1	285 0 0 〃	24 0	10 2	24 0	
82	Loe, R. J.	Clerk	7	1	285 0 0 〃	28 0	0 2	28 2	
83	Bourke, W.	〃	7	1	285 0 0 〃	27 0	0 3	27 3	
1	Ford, J. T.	Clerk	8	2	265 0 0 〃	25 11	..	25 11	
2	Parsons, J. T.	〃	8	2	265 0 0 〃	35 9	..	35 9	
3	Peat, R. B.	Stationmaster-in-charge	8	2	265 0 0 〃	33 0	..	33 0	
4	Harte, J. R.	Stationmaster	8	2	265 0 0 〃	36 1	..	36 1	
5	Pearce, H.	〃	8	2	265 0 0 〃	34 0	..	34 0	
6	McSwan, A. M.	Clerk	8	2	265 0 0 〃	31 6	..	31 6	
7	Barker, W. J.	〃	8	2	265 0 0 〃	34 10	..	34 10	
8	Cole, W. M.	Stationmaster	8	2	265 0 0 〃	27 1	0 10	27 11	
9	Basire, G.	Clerk	8	2	265 0 0 〃	34 0	..	35 7	
10	Pearson, D. T.	Shop Foreman	8	2	265 0 0 〃	38 11	..	38 11	
11	Woodhouse, J. H.	Stationmaster	8	2	265 0 0 〃	37 4	..	37 4	
12	Reed, J. W.	Clerk	8	2	265 0 0 〃	36 3	..	36 3	
13	Eager, T.	Inspector, Perm'ent-way	8	2	265 0 0 〃	25 2	..	25 2	
14	Neale, G. B.	Coaching Foreman	8	1	255 0 0 〃	33 11	..	33 11	
15	Hadfield, J. T.	Clerk	8	2	265 0 0 〃	24 9	0 1	24 9	
16	Fisher, W. B.	〃	8	2	265 0 0 〃	18 0	10 9	30 4	
17	Leopard, H. H.	〃	8	2	265 0 0 〃	29 8	0 2	29 10	
18	Rolfe, A. A.	〃	8	2	265 0 0 〃	27 8	2 4	30 0	
19	Monro, A. M. H.	〃	8	2	265 0 0 〃	30 4	..	30 4	
20	King, W. G.	Stationmaster	8	2	265 0 0 〃	32 11	3 3	32 11	
21	Bartlett, A. T.	Bridge Inspector	8	2	265 0 0 〃	27 11	..	27 11	
22	Burd, W. C.	Clerk	8	2	265 0 0 〃	30 11	4 8	31 2	
23	Veal, W. J.	Stationmaster	8	2	265 0 0 〃	30 10	..	30 10	
24	Forbes, J. G.	Workshop Foreman	8	2	265 0 0 〃	25 6	1 0	25 6	
25	Croft, W.	Relieving Officer	8	2	265 0 0 〃	31 2	..	31 2	
26	Daniell, H.	Stationmaster	8	2	265 0 0 〃	30 10	..	30 10	
27	Harrison, S.	〃	8	2	265 0 0 〃	29 4	..	29 4	
28	Stubbs, A.	Clerk	8	2	265 0 0 〃	28 4	..	28 4	
29	Somerfield, C. F.	Stationmaster	8	2	265 0 0 〃	28 6	..	28 6	
30	Jarman, A. E. F.	Clerk	8	2	265 0 0 〃	27 0	..	27 0	
31	Kirton, A. W.	Stationmaster	8	2	265 0 0 〃	29 10	0 3	30 1	
32	Iles, C. H.	Clerk	8	2	265 0 0 〃	32 2	..	32 2	
33	Hardwick, F. E.	Stationmaster	8	2	265 0 0 〃	29 11	..	29 11	
34	Bell, T. J.	Clerk	8	2	265 0 0 〃	30 0	..	30 0	
35	White, W. J.	〃	8	2	265 0 0 〃	29 8	..	29 8	
36	Mooney, G.	Stationmaster	8	2	265 0 0 〃	29 2	0 3	31 2	
37	Rodie, J. A.	Relieving Officer	8	2	265 0 0 〃	28 11	0 2	29 1	
38	Hutchings, A. W.	Assistant Stationmaster	8	2	265 0 0 〃	28 9	..	28 9	
39	Morgan, J. L.	Clerk	8	2	265 0 0 〃	29 0	..	29 0	
40	Woodbury, J. W.	〃	8	2	265 0 0 〃	28 9	..	28 9	
41	Wright, H. A.	〃	8	2	265 0 0 〃	27 9	0 2	27 11	
42	Simons, R. H.	Stationmaster	8	2	265 0 0 〃	28 6	0 2	28 8	
43	Horsnell, C.	Clerk	8	2	265 0 0 〃	28 4	0 10	29 2	
44	Felton, T. L.	Stationmaster	8	2	265 0 0 〃	28 2	0 5	28 7	
45	Hessell, W. I.	Clerk	8	2	265 0 0 〃	27 3	..	27 3	
46	Miller, M.	Relieving Officer	8	2	265 0 0 〃	27 10	0 5	28 3	
47	Fraser, J.	Clerk	8	2	265 0 0 〃	27 11	..	27 11	
48	Matthewson, G.	〃	8	2	265 0 0 〃	28 0	0 8	28 8	
49	Harding, W.	〃	8	2	265 0 0 〃	27 4	0 3	27 7	
50	Ennis, W. O.	〃	8	2	265 0 0 〃	26 11	0 3	27 2	
51	McCracken, R. P.	〃	8	2	265 0 0 〃	26 2	1 7	27 9	
52	Rackley, E.	〃	8	2	265 0 0 〃	25 8	..	25 8	
53	Widdop, J. E.	〃	8	2	265 0 0 〃	23 4	..	24 0	
54	Hawkins, J. O.	〃	8	2	265 0 0 〃	22 4	4 0	22 4	
55	Meek, E.	Draftsman	8	2	265 0 0 〃	4 6	8 7	13 1	
56	Thomson, D.	〃	8	2	265 0 0 〃	4 4	2 10	7 2	
57	Steven, A.	Stationmaster	8	2	265 0 0 〃	4 4	19 6	23 10	
58	Seager, E. H.	Clerk	8	2	265 0 0 〃	25 7	..	25 7	
59	Mirams, W. A.	〃	8	2	265 0 0 〃	25 11	..	25 11	
60	Hunt, J. A.	〃	8	2	265 0 0 〃	25 5	..	25 5	
61	Jessup, H.	〃	8	2	265 0 0 〃	23 9	1 2	24 11	

Railway Department Classification, 1913—*continued.*

FIRST DIVISION—*continued.*

Subdivision II—*continued.*

Salaried Staff not otherwise specified—continued.

Prog. No.	Name.	Classification. Designation.	Grade.	Subgrade.	Salary. £	s.	d.		Service Since last appointed. Y.	M.	Prior to Date last appointed. Y.	M.	For Superannuation Purposes. Y.	M.	Remarks.
62	Bennett, J. J.	Refreshment-car Supervisor	8	2	265	0	0	per ann.	4	0	5	4	9	4	
63	Bright, A. E.	Storekeeper	8	2	265	0	0	″	24	2	0	3	24	5	
64	Arnold, H.	Stationmaster	8	2	265	0	0	″	27	1	0	3	27	3	
65	Dobbie, A.	Clerk	8	2	265	0	0	″	30	10	1	1	31	11	
66	Fyfe, W.	″	8	2	265	0	0	″	29	3	0	3	29	6	
67	Quin, J. T.	Stationmaster	8	2	265	0	0	″	30	2	0	4	30	6	
68	Bradley, J.	Clerk	8	2	265	0	0	″	28	6	..		..		
69	Dunnage, W. H.	Relieving Officer	8	2	265	0	0	″	27	10	..		27	10	
70	Brown, E. C.	Clerk	8	2	265	0	0	″	27	8	0	1	27	9	
71	Mooney, J.	Inspector, Perm'ent-way	8	2	265	0	0	″	24	8	..		24	8	
72	Gow, A.	Stationmaster	8	2	265	0	0	″	37	5	..		37	5	
73	McSherry, E.	Inspector, Perm'ent-way	8	2	265	0	0	″	23	3	3	4	26	7	
74	Toogood, R. E.	″ ″	8	2	265	0	0	″	30	3	..		30	3	
75	Kavanagh, B.	″ ″	8	2	265	0	0	″	31	7	..		31	7	
76	Foster, J.	Clerk	8	2	265	0	0	″	26	11	0	4	27	3	
77	McDougall, H.	Stationmaster	8	2	265	0	0	″	26	10	0	5	27	3	
78	Peattie, R. M.	″	8	2	265	0	0	″	25	11	..		25	11	
79	Harris, C. St. C.	Clerk	8	2	265	0	0	″	25	0	..		25	0	
80	Duncan, G.	″	8	2	265	0	0	″	25	9	..		25	9	
81	Barclay, L.	″	8	2	265	0	0	″	24	1	0	2	24	3	
82	Brown, A. F.	Stationmaster	8	2	265	0	0	″	23	9	0	3	24	0	
83	Coop, H.	″	8	2	265	0	0	″	24	0	..		28	2	
84	Cameron, J.	Clerk	8	2	265	0	0	″	23	11	..		23	11	
85	Robertson, C. F.	″	8	2	265	0	0	″	24	3	..		24	3	
86	Low, J.	Foreman of Works	8	2	265	0	0	″	19	4	4	3	23	7	
87	Brooks, H. G.	Workshop Foreman	8	2	265	0	0	″	23	3	8	2	32	2	
88	Cole, W. H.	″	8	2	265	0	0	″	30	11	5	8	30	11	
89	Clarke, J. S.	″	8	2	265	0	0	″	28	7	..		28	7	
90	Bennett, G. W.	Stationmaster	8	2	265	0	0	″	27	5	..		27	5	
91	Warren, J.	Inspector, Perm'ent-way	8	2	265	0	0	″	25	11	..		25	11	
92	Egan, E.	″ ″	8	2	265	0	0	″	30	6	0	7	31	1	
93	Pyne, W.	Bridge Inspector	8	2	265	0	0	″	25	3	..		25	3	
94	Cooper, E. J.	Workshop Foreman	8	2	265	0	0	″	11	0	2	1	13	1	
95	Barbour, J.	″	8	2	265	0	0	″	11	0	1	6	12	6	
96	Truman, F.	Assist. Traffic Inspector	8	2	265	0	0	″	27	3	..		27	3	
97	Burns, D. C.	Clerk	8	2	265	0	0	″	26	11	..		26	11	
98	Davis, F. G.	Stationmaster	8	1	240	0	0	″	30	6	..		30	6	
99	Hislop, J.	″	8	1	255	0	0	″	28	7	..		28	7	
100	Burrell, H. E.	Coaching Foreman	8	1	255	0	0	″	30	2	..		30	2	
101	Freed, E. H.	Car and Wagon Inspector	8	1	255	0	0	″	23	0	0	11	23	0	
102	Kirkpatrick, J. S.	Clerk	8	1	255	0	0	″	27	7	..		27	7	
103	Riddock, J. W.	Goods Foreman	8	1	255	0	0	″	30	5	..		30	5	
104	Croft, J. O.	Stationmaster	8	1	255	0	0	″	28	9	..		28	9	
105	Unsworth, F.*	″	8	1	255	0	0	″	25	7	..		29	10	
106	Jones, W.	Clerk	8	1	255	0	0	″	28	4	..		28	4	
107	Kemp, J.	Stationmaster	8	1	255	0	0	″	24	1	..		24	1	
108	MacLeod, N.	Clerk	8	1	255	0	0	″	23	10	..		23	10	
109	Petrie, J. P.	″	8	1	255	0	0	″	23	9	..		23	9	
110	Ridgley, W. W.	Stationmaster	8	1	255	0	0	″	23	8	0	1	23	9	
111	Brodie, L. G. S.	Clerk	8	1	255	0	0	″	23	9	0	2	23	11	
112	Sandford, T. H.	Stationmaster	8	1	255	0	0	″	23	7	0	2	23	9	
113	Smith, A. P.	Clerk	8	1	255	0	0	″	23	9	..		23	9	
114	Pearson, J.	″	8	1	255	0	0	″	23	8	..		23	8	
115	Taylor, A. R.	″	8	1	255	0	0	″	29	0	..		29	0	
116	Comer, E. J.	Stationmaster	8	1	255	0	0	″	27	11	..		27	11	
117	Kelly, E. S.	Clerk	8	1	255	0	0	″	27	11	0	8	28	7	
118	Hales, W. H.	″	8	1	255	0	0	″	24	9	0	1	24	10	
119	Boyes, A. E.	″	8	1	255	0	0	″	24	3	..		24	3	
120	Weir, D. D.	″	8	1	255	0	0	″	24	5	..		24	5	
121	Marris, B. A.	″	8	1	255	0	0	″	23	6	0	11	24	5	
122	Ashby, T.	Inspector, Perm'ent-way	8	1	255	0	0	″	28	7	1	10	30	5	
123	Smith, G. C.	Assistant Locomotive Foreman	8	1	255	0	0	″	34	11	1	5	34	11	
124	Underwood, T.	Ditto	8	1	255	0	0	″	38	1	..		38	1	
125	Hyslop, R.	Inspector, Perm'ent-way	8	1	255	0	0	″	24	8	0	10	25	6	
126	Sellars, C. A.	″ ″	8	1	255	0	0	″	37	3	..		37	3	
127	Hamilton, S.	″ ″	8	1	255	0	0	″	28	2	..		28	2	
128	McGregor, D.	Clerk	8	1	255	0	0	″	23	1	..		23	1	
129	Buck, P. A.	″	8	1	255	0	0	″	24	3	..		24	3	
130	West, H. P.	″	8	1	255	0	0	″	23	6	..		23	6	
131	Noye, T.	Inspector, Perm'ent-way	8	1	255	0	0	″	21	10	4	5	26	3	
132	Green, B.	Foreman of Works	8	1	255	0	0	″	25	10	..		25	10	
133	Taylor, A. P.	Bridge Inspector	8	1	255	0	0	″	30	10	..		30	10	
134	Mason, J.	Clerk	8	1	255	0	0	″	23	6	0	3	23	9	
135	Hunt, A. H.	″	8	1	255	0	0	″	27	4	..		29	1	
136	Hill, S. D.	Stationmaster	8	1	255	0	0	″	25	0	1	3	25	3	

RAILWAY DEPARTMENT CLASSIFICATION, 1913—*continued.*

FIRST DIVISION—*continued.*

SUBDIVISION II—*continued.*

Salaried Staff not otherwise specified—continued.

Prog. No.	Name.	Classification.				Service			Remarks.
		Designation.	Grade.	Subgrade.	Salary.	Since last appointed.	Prior to Date last appointed.	For Superannuation Purposes.	
					£ s. d.	Y. M.	Y. M.	Y. M.	
1	Duncan, A. D.	Clerk	9	2	230 0 0 per ann.	26 10	..	26 10	
2	Stubbs, T. H.	〃	9	2	230 0 0 〃	26 6	0 4	26 10	
3	Cameron, G. D.	Stationmaster	9	2	230 0 0 〃	34 5	..	34 5	
4	Bateman, J. C. W.	〃	9	2	230 0 0 〃	35 9	..	35 9	
5	Arthur, T. M.	〃	9	2	230 0 0 〃	37 7	..	37 7	
6	Ingpen, E. E.	〃	9	2	230 0 0 〃	36 5	..	36 5	
7	Butterworth, W. H.	Clerk	9	2	230 0 0 〃	30 1	0 11	31 0	
8	Aitken, W.	Stationmaster	9	2	230 0 0 〃	31 1	1 2	32 3	
9	Tully, M. C.	〃	9	2	230 0 0 〃	32 11	..	37 8	
10	Mearns, W. R. G.	Clerk	9	2	230 0 0 〃	31 0	0 2	31 2	
11	Kearney, R.	Stationmaster	9	2	230 0 0 〃	30 0	..	30 0	
12	Belworthy, C.	Clerk	9	2	230 0 0 〃	29 6	..	29 6	
13	Connal, R. J.	Stationmaster	9	2	230 0 0 〃	30 10	..	30 10	
14	Carter, J. E.	〃	9	2	230 0 0 〃	29 10	..	29 10	
15	Bourke, E.	〃	9	2	230 0 0 〃	29 6	..	29 6	
16	Rasmussen, L. V.	〃	9	2	230 0 0 〃	27 9	0 6	28 3	
17	Campbell, A. A.	〃	9	2	230 0 0 〃	33 4	..	33 4	
18	Stone, G. W.	〃	9	2	230 0 0 〃	28 0	..	28 0	
19	Pimm, W.	〃	9	2	230 0 0 〃	28 9	..	28 9	
20	David, S.	Bridge Inspector	9	2	230 0 0 〃	24 7	..	24 7	
21	Pattle, T.	Clerk	9	2	230 0 0 〃	36 1	..	36 1	
22	Hardwick, J. P.	Stationmaster	9	2	230 0 0 〃	35 3	..	35 3	
23	Stringer, W. J.	Clerk	9	2	230 0 0 〃	28 4	..	28 4	
24	Griffiths, G.	Assistant Locomotive Foreman	9	2	230 0 0 〃	29 7	..	29 7	
25	Bush, H. R.	Clerk	9	2	230 0 0 〃	23 8	..	23 8	
26	Brown, A.	Stationmaster	9	2	230 0 0 〃	22 10	4 4	22 10	
27	Clark, J.	Clerk	9	2	230 0 0 〃	23 5	..	23 5	
28	Wright, S.	Stationmaster	9	2	230 0 0 〃	23 4	0 4	23 8	
29	Phillips, F. W.	Clerk	9	2	230 0 0 〃	23 7	..	23 7	
30	McEachen, C. J.	〃	9	2	230 0 0 〃	23 4	..	23 4	
31	Tregurtha, W. T.	〃	9	2	230 0 0 〃	23 0	0 6	23 6	
32	Andrews, H. P.	Stationmaster	9	2	230 0 0 〃	22 11	0 6	23 5	
33	Wilson, J. M.	Clerk	9	2	230 0 0 〃	23 2	..	23 2	
34	McNicol, M. S.	Stationmaster	9	2	230 0 0 〃	23 1	0 2	23 3	
35	Conn, C.	Clerk	9	2	230 0 0 〃	24 4	..	24 4	
36	Hendry, T.	Electrical Mechanician	9	2	230 0 0 〃	11 6	0 2	11 8	
37	O'Shea, J. J.	Stationmaster	9	2	230 0 0 〃	23 3	..	23 3	
38	Chapman, H.	Clerk	9	2	230 0 0 〃	23 2	..	23 2	
39.	Pasley, R. S.	〃	9	2	230 0 0 〃	23 2	..	23 2	
40	Hartland, J. E.	〃	9	2	230 0 0 〃	24 9	..	24 9	
41	Comer, D. J.	〃	9	2	230 0 0 〃	27 0	0 3	27 3	
42	Lezard, E. J.	Stationmaster	9	2	230 0 0 〃	23 2	..	23 2	
43	McPherson, J. G.	〃	9	2	230 0 0 〃	23 1	..	23 1	
44	Chittey, W. H.	Clerk	9	2	230 0 0 〃	25 3	1 6	26 9	
45	Stephens, R. H.	〃	9	2	230 0 0 〃	24 0	1 0	25 0	
46	Lynch, T. W.	Goods Foreman	9	2	230 0 0 〃	30 0	..	30 0	
47	Stanaway, H. P.	Assist. Relieving Officer	9	2	230 0 0 〃	23 1	0 1	23 2	
48	Hume, J.	Clerk	9	2	230 0 0 〃	23 1	..	23 1	
49	Thode, A. E. F.	Stationmaster	9	2	230 0 0 〃	23 1	..	23 1	
50	Firman, A. E.	Clerk	9	2	230 0 0 〃	23 1	..	23 1	
51	Pavitt, J. T.	〃	9	2	230 0 0 〃	23 1	..	23 1	
52	Hillary, N. A. K.	〃	9	2	230 0 0 〃	23 1	..	23 1	
53	Henderson, A. S.	Draftsman	9	2	230 0 0 〃	18 3	..	18 3	
54	Howitt, Ad.	〃	9	2	230 0 0 〃	13 9	3 0	14 9	
55	Fry, W. W.	〃	9	2	230 0 0 〃	12 4	3 1	15 5	
56	Wilson, G.	Technical Clerk	9	2	230 0 0 〃	22 10	..	22 10	
57	Hudson, A.	Signal Foreman	9	2	230 0 0 〃	11 2	..	11 2	
58	Wallis, J. F.	Workshop Foreman	9	2	230 0 0 〃	10 9	5 8	16 6	
59	Treasure, R. R.	Assistant Locomotive Foreman	9	2	230 0 0 〃	36 2	..	36 2	
60	Nelson, R.	Bridge Inspector	9	2	230 0 0 〃	16 0	7 10	22 8	
61	McKillop, D.	Workshop Foreman	9	2	230 0 0 〃	40 0	..	40 0	
62	Shepherd, J.	Timber Checker	9	2	230 0 0 〃	37 5	..	37 5	
63	Button, A. S.	Clerk	9	2	230 0 0 〃	30 6	..	30 6	
64	Greatbatch, J. T. B.	〃	9	2	230 0 0 〃	32 3	..	33 10	
65	Hall, T. L.	〃	9	2	230 0 0 〃	30 2	..	30 2	
66	Todd, H. W.	Goods Foreman	9	2	230 0 0 〃	22 5	0 1	22 6	
67	Mirams, H. F.	Stationmaster	9	2	230 0 0 〃	23 11	..	23 11	
68	Laurie, R.	〃	9	2	230 0 0 〃	22 11	..	22 11	
69	Coldicutt, P. F.	〃	9	2	230 0 0 〃	22 11	..	22 11	
70	Shelton, G. W.	〃	9	2	230 0 0 〃	22 11	..	22 11	
71	Miller, J.	〃	9	2	230 0 0 〃	22 11	..	22 11	
72	Milner, W. J. E.	〃	9	2	230 0 0 〃	22 11	..	22 11	
73	Downes, L. S.	Clerk	9	2	230 0 0 〃	22 11	..	22 11	

RAILWAY DEPARTMENT CLASSIFICATION, 1913—*continued.*

FIRST DIVISION—*continued.*

SUBDIVISION II—*continued.*

Salaried Staff not otherwise specified—continued.

Prog. No.	Name.	Classification.				Service			Remarks.
		Designation.	Grade.	Subgrade.	Salary.	Since last appointed.	Prior to Date last appointed.	For Superannuation Purposes.	
					£ s. d.	Y. M.	Y. M.	Y. M.	
74	Russell, R.	Stationmaster	9	2	230 0 0 per ann.	22 11	..	22 11	
75	Davison, S.	"	9	2	230 0 0 "	22 11	..	22 11	
76	Webb, S. J.	"	9	2	230 0 0 "	22 10	..	22 10	
77	Fogo, J. V.	Clerk	9	2	230 0 0 "	22 10	..	22 10	
78	Bambery, A.	Goods Foreman	9	2	230 0 0 "	26 3	1 9	26 6	
79	Williams, A. R.	Stationmaster	9	2	230 0 0 "	22 11	..	22 11	
80	Aitken, J.	Clerk	9	2	230 0 0 "	22 9	..	22 9	
81	Mackenzie, J. A.	Stationmaster	9	2	230 0 0 "	22 9	..	22 9	
82	Davidson, R.	"	9	2	230 0 0 "	22 8	..	22 8	
83	Wray, W. G.	Storekeeper	9	2	230 0 0 "	22 8	..	22 8	
84	Bowling, W.	Stationmaster	9	2	230 0 0 "	22 8	..	22 8	
85	Ahern, W. E.	Clerk	9	2	230 0 0 "	22 7	..	22 7	
86	Stephens, T. A.	Stationmaster	9	2	230 0 0 "	22 6	..	22 6	
87	Hay-Mackenzie, W. E.	Clerk	9	2	230 0 0 "	22 4	..	22 4	
88	Smith, H. D.	"	9	2	230 0 0 "	22 4	..	22 4	
89	Finlayson, F.	Stationmaster	9	2	230 0 0 "	22 4	..	22 4	
90	Smith, W. J.	"	9	2	230 0 0 "	22 4	..	22 4	
91	Miller, A. D.	Clerk	9	2	230 0 0 "	22 2	..	22 2	
92	Beekman, A.	"	9	2	230 0 0 "	22 1	..	22 1	
93	MacKellar, D.	"	9	2	230 0 0 "	21 2	..	21 2	
94	Lucy, T. M.	"	9	2	230 0 0 "	20 6	..	20 6	
95	Smith, W.	Goods Foreman	9	2	230 0 0 "	30 0	..	30 0	
96	Megget, F.	Stationmaster	9	2	230 0 0 "	23 1	..	23 1	
97	Duncan, J. C.	Clerk	9	2	230 0 0 "	22 3	..	22 3	
98	Hutchison, J.	"	9	2	230 0 0 "	22 1	..	22 1	
99	Donald, D. J.	Stationmaster	9	2	230 0 0 "	22 1	..	22 1	
100	Pickard, J.	"	9	2	230 0 0 "	22 1	..	22 1	
101	Murray, W. A.	"	9	2	230 0 0 "	22 1	..	22 1	
102	Clarke, E.	Clerk	9	2	230 0 0 "	22 0	..	22 0	
103	Jones, H.	Goods Foreman	9	2	230 0 0 "	22 5	1 0	23 5	
104	Cummings, H.	Coaching Foreman	9	2	230 0 0 "	36 8	..	36 8	
105	Jones, J. W.	Goods Foreman	9	2	230 0 0 "	34 2	..	34 2	
106	Gibb, W.	Coaching Foreman	9	2	230 0 0 "	34 0	..	34 0	
107	Benney, M.	Ticket Inspector	9	2	230 0 0 "	34 6	..	34 6	
108	O'Leary, C.	Inspector, Perm'ent-way	9	2	230 0 0 "	24 6	1 3	25 9	
109	Carey, G. N.	Workshop Foreman	9	2	230 0 0 "	30 9	..	30 9	
110	Simmons, C. E.	Coaching Foreman	9	2	230 0 0 "	29 4	..	29 4	
111	Shields, W.	Timber Checker	9	2	230 0 0 "	30 1	..	30 1	
112	Johnston, J.	Goods Foreman	9	2	230 0 0 "	30 2	..	30 2	
113	Robertson, W. J.	Coaching Foreman	9	2	230 0 0 "	22 7	..	22 7	
114	Spencer, W.	Goods Foreman	9	2	230 0 0 "	27 1	..	27 1	
115	Brislane, J.	"	9	2	230 0 0 "	30 5	..	30 5	
116	Beck, T. F.	Coaching Foreman	9	2	230 0 0 "	26 10	..	26 10	
117	Stewart, W.	"	9	2	230 0 0 "	22 6	11 4	33 11	
118	Flower, W. C.	Goods Foreman	9	2	230 0 0 "	27 10	1 6	29 4	
119	Sweeney, J.	"	9	2	230 0 0 "	18 8	6 0	18 8	
120	Henderson, J. C.	"	9	2	230 0 0 "	22 4	..	22 4	
121	Roberts, J.	Coaching Foreman	9	2	230 0 0 "	32 11	..	32 11	
122	Dunn, A.	"	9	2	230 0 0 "	29 9	..	29 9	
123	Myerscough, R. G.	Signal Foreman	9	2	230 0 0 "	11 5	0 1	11 6	
124	O'Leary, D.	Inspector, Perm'ent-way	9	2	230 0 0 "	35 0	..	35 0	
125	Bushill, W.	Storekeeper	9	2	230 0 0 "	21 9	..	21 9	
126	Ussher, E. N.	Clerk	9	2	230 0 0 "	20 10	..	20 10	
127	Collins, R. T.	"	9	2	230 0 0 "	20 9	..	20 9	
128	Guiness, E. J.	"	9	2	230 0 0 "	20 9	..	20 9	
129	Rodgers, W.	Bridge Inspector	9	2	230 0 0 "	21 11	..	21 11	
130	Drummond, G.	Stationmaster	9	2	230 0 0 "	22 0	..	22 0	
131	Drummond, J. M.	Bridge Inspector	9	2	230 0 0 "	21 6	..	21 6	
132	Davis, H.	Locomotive Foreman	9	2	230 0 0 "	33 3	..	33 3	
133	Shaw, R.	"	9	2	230 0 0 "	36 4	..	36 4	
134	Dennehy, M.	Clerk	9	2	230 0 0 "	21 11	..	21 11	
135	Ingleton, E. J.	"	9	2	230 0 0 "	21 11	..	21 11	
136	McCaffry, J.	Workshop Foreman	9	2	230 0 0 "	19 5	..	19 5	
137	Boyce, T. E.	Clerk	9	2	230 0 0 "	21 10	..	21 10	
138	Marshall, W. H.	Stationmaster	9	2	230 0 0 "	28 4	..	28 4	
139	Greatbatch, E.	"	9	2	230 0 0 "	23 9	0 3	24 0	
140	White, J. H.	"	9	2	230 0 0 "	22 10	..	22 10	
141	Cunningham, T.	Clerk	9	2	230 0 0 "	21 9	..	21 9	
142	Applegarth, G. E.	Stationmaster	9	2	230 0 0 "	22 1	..	22 1	
143	Holder, H. F.	Workshop Foreman	9	2	230 0 0 "	29 11	..	29 11	
144	Moore, D. A.	Car and Wagon Inspector	9	2	230 0 0 "	21 1	..	21 1	
145	Wylie, H.	Brake Inspector	9	2	230 0 0 "	19 4	2 3	19 4	
146	Greatbatch, S.	Stationmaster	9	2	230 0 0 "	21 9	..	24 0	
147	Osborne, W. F.	Inspector, Perm'ent-way	9	2	230 0 0 "	27 6	..	27 6	
148	Round, D. J.	Workshop Foreman	9	2	230 0 0 "	34 2	..	34 2	

RAILWAY DEPARTMENT CLASSIFICATION, 1913—*continued.*

FIRST DIVISION—*continued.*

SUBDIVISION II—*continued.*

Salaried Staff not otherwise specified—continued.

Prog. No.	Name.	Classification.							Service						Remarks.
		Designation.	Grade.	Subgrade.	Salary.				Since last appointed.		Prior to Date last appointed.		For Superannuation Purposes.		
					£	s.	d.		Y.	M.	Y.	M.	Y.	M.	
149	Snow, T.	Clerk	9	2	230	0	0	per ann.	21	9	..		21	9	
150	Skinner, R. S.	„	9	2	230	0	0	„	21	7	1	4	21	7	
151	Geraghty, T. H.	Inspector, Perm'ent-way	9	2	230	0	0	„	22	7	..		22	7	
152	Andrews, L.	Stationmaster	9	2	230	0	0	„	21	7	..		21	7	
153	Cooney, P.	„	9	2	230	0	0	„	22	1	..		22	1	
154	Street, T.	Bridge Inspector	9	2	245	0	0	„	4	4	22	3	26	7	
155	Pirie, W.	Shop Foreman	9	2	245	0	0	„	4	4	4	10	9	2	
156	Smith, P. H.	Clerk	9	2	230	0	0	„	4	4	10	5	14	9	
157	Taylor, J.	Assistant Locomotive Foreman	9	2	230	0	0	„	4	4	22	1	26	5	
158	McLeman, H.	Inspector, Perm'ent-way	9	2	230	0	0	„	4	4	6	4	10	8	
159	Rayson, G.	„ „	9	2	230	0	0	„	26	2	..		26	2	
160	Lonie, T.	„ „	9	2	230	0	0	„	24	6	..		24	6	
161	Gerard, C. H. E.	Stationmaster	9	2	230	0	0	„	21	4	..		21	4	
162	Currie, J.	Inspector, Perm'ent-way	9	2	230	0	0	„	28	0	0	4	28	4	
163	Graham, J.	Stationmaster	9	2	230	0	0	„	21	4	..		21	4	
164	Ford, H. H.	„	9	2	230	0	0	„	29	0	..		29	0	
165	Noble, W.	Clerk	9	2	230	0	0	„	23	6	0	3	23	9	
166	Chambers, K. J.	Stationmaster	9	2	230	0	0	„	22	11	..		22	11	
167	Brown, J.	Assistant Locomotive Foreman	9	2	230	0	0	„	30	5	..		30	5	
168	Guthrie, M.	Locomotive Foreman	9	2	230	0	0	„	34	2	..		34	2	
169	Holmes, J. T.	Shop Foreman	9	2	230	0	0	„	18	0	0	3	18	3	
170	Waterhouse, W. J. T.	Bridge Inspector	9	2	230	0	0	„	19	8	0	4	20	0	
171	Pycroft, A. T.	Clerk	9	2	230	0	0	„	22	1	..		22	1	
172	Morton, W. P.	Assist. Relieving Officer	9	2	230	0	0	„	21	4	..		21	4	
173	Rowe, J. J.	Stationmaster	9	2	230	0	0	„	21	3	..		21	3	
174	Morgan, R. H.	Clerk	9	2	230	0	0	„	21	3	..		21	3	
175	Taylor, P. G.	„	9	2	230	0	0	„	21	3	..		21	3	
176	Read, C. T.	Stationmaster	9	2	230	0	0	„	20	11	..		20	11	
177	Scott, R. D	Clerk	9	2	230	0	0	„	19	8	..		19	8	
178	Veale, F. S.	„	9	2	230	0	0	„	21	9	..		21	9	
179	Fowler, J.	„	9	2	230	0	0	„	21	3	..		21	3	
180	Henderson, J. W.	„	9	2	230	0	0	„	21	3	..		21	3	
181	Fowke, C. E.	Stationmaster (Edendale)	9	2	230	0	0	„	21	2	..		21	2	
182	Lowry, H. D.	Clerk	9	2	230	0	0	„	21	2	..		21	2	
183	Morgan, G. H. W.	„	9	2	230	0	0	„	21	1	..		21	1	
184	Bryant, G. T.	„	9	2	230	0	0	„	21	1	..		21	1	
185	Blackmore, G. S. J.	Stationmaster	9	2	230	0	0	„	21	0	..		21	0	
186	Gardner, H. H.	Clerk	9	2	230	0	0	„	21	0	..		21	0	
187	Armstrong, J.	Workshop Foreman	9	2	230	0	0	„	26	9	..		26	9	
188	Batie, J. W.	„	9	2	230	0	0	„	30	3	..		30	3	
189	Hope, R.	Locomotive Foreman	9	2	230	0	0	„	34	6	..		34	6	
190	King, J.	Shop Foreman	9	2	230	0	0	„	21	10	..		21	10	
191	Cox, W. M.	„	9	2	230	0	0	„	13	7	2	2	13	11	
192	Sherwin, J. H.	Workshop Foreman	9	2	230	0	0	„	25	8	1	8	25	8	
193	Townson, G. E.	Inspector Perm'ent-way	9	2	230	0	0	„	29	2	..		29	2	
194	Bennett, E. G.	Stationmaster	9	2	230	0	0	„	24	3	1	8	25	11	
195	Scott, E. L.	Clerk	9	2	230	0	0	„	23	7	..		23	7	
196	Duncan, W. M.	Coaching Foreman	9	2	230	0	0	„	30	9	5	2	30	9	
197	Low, D.	Clerk	9	2	230	0	0	„	31	4	..		31	4	
198	Robinson, T. I.	„	9	2	230	0	0	„	21	8	..		21	8	
199	Fastier, A.	„	9	2	230	0	0	„	22	1	..		22	1	
200	Turton, H.	„	9	2	230	0	0	„	21	2	..		21	2	
201	Ryan, C. P.	„	9	2	230	0	0	„	20	9	..		20	9	
202	Boswell, J. A.	Stationmaster	9	2	230	0	0	„	20	11	..		20	11	
203	Penn, H. A.	„	9	2	230	0	0	„	20	9	..		20	9	
204	Hutt, G. L. A.	Clerk	9	..	220	0	0	„	20	9	..		20	9	
205	Stephens, G. F.	Stationmaster	9	2	230	0	0	„	21	2	..		21	2	
206	Porteous, F. K.	Clerk	9	2	230	0	0	„	20	9	..		20	9	
207	Wallace, G. N.	„	9	2	230	0	0	„	20	9	..		20	9	
208	Doolan, J. E.	„	9	2	230	0	0	„	17	10	..		17	10	
209	Dick, J. W.	Stationmaster	9	2	230	0	0	„	17	10	..		17	10	
210	Reid, J.	„	9	2	230	0	0	„	20	2	..		20	2	
211	Pringle, S.	Clerk	9	2	230	0	0	„	20	1	..		20	1	
212	Sword, B. R.	Stationmaster	9	2	230	0	0	„	20	1	..		20	1	
213	Rickerby, J. G.	Clerk	9	2	230	0	0	„	19	10	..		19	10	
214	Truman, A. C.	Stationmaster	9	2	230	0	0	„	24	9	..		27	4	
215	Roussell, P. G.	„	9	2	230	0	0	„	19	11	..		19	11	
216	Cameron, A. M.	„	9	2	230	0	0	„	19	10	..		19	10	
217	Richards, B. E.	Clerk	9	2	230	0	0	„	9	0	..		9	0	
218	Grover, E.	Stationmaster	9	2	230	0	0	„	19	7	..		19	7	
219	Greig, G.	Clerk	9	2	230	0	0	„	19	7	..		19	7	
220	Fleming, H. de B.	Stationmaster	9	2	230	0	0	„	19	4	..		19	4	
221	Reid, E. J.	„	9	2	230	0	0	„	19	2	..		19	2	
222	Burns, A.	„	9	2	230	0	0	„	19	2	..		19	2	

FIRST DIVISION—*continued.*

SUBDIVISION II—*continued.*

Salaried Staff not otherwise specified—continued.

Prog. No.	Name.	Classification.				Service			Remarks.
		Designation.	Grade.	Subgrade.	Salary.	Since last appointed.	Prior to Date last appointed.	For Superannuation Purposes.	
					£ s. d.	Y. M.	Y. M.	Y. M.	
223	Rodie, D.	Clerk	9	2	230 0 0 per ann.	19 2	..	19 2	
224	Wellings, W. A.	〃	9	2	230 0 0 〃	17 3	..	17 3	
225	McGovern, P. J.	〃	9	2	230 0 0 〃	16 8	..	16 8	
226	Elliot, W.	Workshop Foreman	9	2	230 0 0 〃	22 11	7 9	22 11	
227	Horn, E,	Inspector, Perm'ent-way	9	2	230 0 0 〃	30 9	..	30 9	
228	Orange, A. E.	Bridge Inspector	9	2	230 0 0 〃	19 0	0 7	19 7	
229	Valentine, J.	Workshop Foreman	9	2	230 0 0 〃	26 9	..	26 9	
230	Bell, H. R.	Clerk	9	2	230 0 0 〃	30 1	..	30 1	
231	Pearse, H.	Goods Foreman	9	2	230 0 0 〃	26 6	..	26 6	
232	Clark, P. A.	〃	9	2	230 0 0 〃	36 0	..	36 0	
233	Baillie, T. G.	Clerk	9	2	230 0 0 〃	21 9	..	21 9	
234	Cameron, H.	Stationmaster	9	2	230 0 0 〃	20 10	..	20 10	
235	Hartley, W.	Clerk	9	2	230 0 0 〃	20 2	..	20 2	
236	Delany, F. M.	Stationmaster	9	2	230 0 0 〃	19 2	..	19 2	
237	Brown, J.	Assist. Relieving Officer	9	2	230 0 0 〃	19 1	..	19 1	
238	Hartland, P. H.	Clerk	9	2	230 0 0 〃	18 5	..	18 5	
239	Bond, P. J.	Assist. Relieving Officer	9	2	230 0 0 〃	18 3	..	18 3	
240	Fowke, R. A. G.	Stationmaster	9	2	230 0 0 〃	18 3	..	18 3	
241	Thompson, A. R.	Clerk	9	2	230 0 0 〃	18 3	..	18 3	
242	Green, H.	〃	9	2	230 0 0 〃	17 10	..	17 10	
243	Adams, H. E.	〃	9	2	230 0 0 〃	17 6	..	17 6	
244	Foote, W. J.	〃	9	2	230 0 0 〃	18 3	..	18 3	
245	Shera, H. M.	〃	9	2	230 0 0 〃	18 3	..	18 3	
246	Warren, W. J.	〃	9	2	230 0 0 〃	18 0	..	18 0	
247	Curtis, J. W.	〃	9	2	230 0 0 〃	18 0	..	18 0	
248	Robson, M.	〃	9	2	230 0 0 〃	13 11	20 1	15 10	
249	Rowden, F. J.	〃	9	2	230 0 0 〃	13 11	1 0	14 11	
250	Bakewell, T. H. F.	〃	9	2	230 0 0 〃	13 9	12 2	14 7	
251	Bray, R. P.	〃	9	2	230 0 0 〃	13 9	6 11	14 7	
252	Graham, F.	Stationmaster	9	2	230 0 0 〃	18 0	..	18 0	
253	Moir, E. P.	Clerk	9	2	230 0 0 〃	17 3	..	17 3	
254	Larkin, H. J.	Stationmaster	9	2	230 0 0 〃	17 6	..	17 6	
255	Bell, C. R.	Clerk	9	2	230 0 0 〃	17 5	..	17 5	
256	Thomson, W.	Stationmaster	9	2	230 0 0 〃	17 4	..	17 4	
257	Buchanan, R. J.	Clerk	9	2	230 0 0 〃	17 3	..	17 3	
258	Guinness, H. C.	〃	9	2	230 0 0 〃	17 4	..	17 4	
259	Robson, N. R.	〃	9	2	230 0 0 〃	17 1	..	17 1	
260	Lancaster, C. E.	Stationmaster	9	2	230 0 0 〃	17 0	..	17 0	
261	Porter, F.	〃	9	2	230 0 0 〃	17 0	..	17 0	
262	Richards, E. D.	Clerk	9	2	230 0 0 〃	16 8	..	16 8	
263	Neale, H. E.	Stationmaster	9	2	230 0 0 〃	17 0	..	17 0	
264	Scrimgeour, P. G.	Clerk	9	2	230 0 0 〃	17 0	..	17 0	
265	Hope, R.	〃	9	2	230 0 0 〃	17 0	..	17 0	
266	Robertson, W.	〃	9	2	230 0 0 〃	16 11	..	16 11	
267	Davis, W. J.	〃	9	2	230 0 0 〃	16 10	..	16 10	
268	Housley, B. C.	Stationmaster	9	2	230 0 0 〃	16 10	..	16 10	
269	Tasker, J. M.	〃	9	2	230 0 0 〃	16 10	..	16 10	
270	Forward, E. L.	Clerk	9	2	230 0 0 〃	16 10	..	16 10	
271	O'Connor, T. A.	〃	9	2	230 0 0 〃	16 9	..	16 9	
272	White, W. F.	Stationmaster	9	2	230 0 0 〃	16 9	..	16 9	
273	Carnachan, J.	〃	9	2	230 0 0 〃	16 9	..	16 9	
274	Jarman, W. H.	Clerk	9	2	230 0 0 〃	16 9	..	16 9	
275	McComish, J. D.	〃	9	2	230 0 0 〃	16 7	..	16 7	
276	Moon, C. J.	Stationmaster	9	2	230 0 0 〃	16 6	..	16 6	
277	Virtue, C. H.	Clerk	9	2	230 0 0 〃	16 6	..	16 6	
278	Reay, J. W.	〃	9	2	230 0 0 〃	12 0	14 4	12 4	
279	Holland, D. F.	〃	9	2	230 0 0 〃	12 0	..	12 0	
280	Coomber, A. E.	〃	9	2	230 0 0 〃	12 0	..	12 0	
281	Marshall, W. A.	Stationmaster	9	2	230 0 0 〃	11 9	8 10	11 9	
282	Press, C. W.	Clerk	9	2	230 0 0 〃	11 7	0 6	12 1	
283	Hunt, F. E.	Stationmaster	9	2	230 0 0 〃	11 7	0 5	12 0	
284	Kearin, M. P.	Clerk	9	2	230 0 0 〃	11 1	0 11	12 0	
285	Beauchamp, E. P.	〃	9	2	230 0 0 〃	11 0	0 10	11 9	
286	Gifford, B. C.	Stationmaster	9	2	230 0 0 〃	10 11	0 3	11 2	
287	Bennett, W. F.	Clerk	9	2	230 0 0 〃	10 9	0 10	11 7	
288	Marsh, G.	〃	9	2	230 0 0 〃	10 8	1 2	11 10	
289	Isherwood, A. C. R.	〃	9	2	230 0 0 〃	10 6	0 5	10 11	
290	Longton, A. N.	〃	9	2	230 0 0 〃	16 0	..	16 0	
291	Mahony, D.	〃	9	2	230 0 0 〃	16 5	..	16 5	
292	Moore, R. H. T.	〃	9	2	230 0 0 〃	10 5	1 2	11 7	
293	Lennon, C. J.	〃	9	2	230 0 0 〃	16 3	..	16 3	
294	Lowry, J. W.	〃	9	2	230 0 0 〃	16 0	..	16 0	
295	Miller, W. P.	〃	9	2	230 0 0 〃	15 8	..	15 8	
296	Radford, W. J. B.	Coaching Foreman	9	2	230 0 0 〃	22 10	4 5	27 4	
297	Davies, C. J.	〃	9	2	230 0 0 〃	27 10	..	27 10	

Railway Department Classification, 1913—*continued.*

FIRST DIVISION—*continued.*

Subdivision II—*continued.*

Salaried Staff not otherwise specified—continued.

Prog. No.	Name.	Classification.				Service			Remarks.
		Designation.	Grade.	Subgrade.	Salary.	Since last appointed.	Prior to Date last appointed.	For Superannuation Purposes.	
					£ s. d.	Y. M.	Y. M.	Y. M.	
298	Gomer, T. C.	Coaching Foreman	9	2	230 0 0 per ann.	31 9	..	31 9	
299	Barkman, P.	〃	9	2	230 0 0 〃	34 0	..	34 0	
300	McKnight, J.	Goods Foreman	9	2	230 0 0 〃	17 10	..	17 10	
301	McLeod, G.	〃	9	2	230 0 0 〃	30 0	..	30 0	
302	Guiness, W. J. P.	Coaching Foreman	9	1	215 0 0 〃	19 6	..	19 6	
303	Clarkson, W.	Goods Foreman	9	2	230 0 0 〃	29 0	1 8	30 8	
304	Bowman, J.	〃	9	2	230 0 0 〃	28 11	..	28 11	
305	O'Keeffe, E. J. H.	Coaching Foreman	9	2	230 0 0 〃	32 10	..	32 10	
306	Currie, J.	Goods Foreman	9	2	230 0 0 〃	30 10	..	30 10	
307	DeClifford, G. L.	Coaching Foreman	9	2	230 0 0 〃	26 6	..	26 6	
308	Olsen, H. T.	〃	9	2	230 0 0 〃	25 1	..	25 1	
309	Herdman, T. F.	〃	9	1	215 0 0 〃	4 4	20 8	6 11	
310	White, J.	Goods Foreman	9	1	215 0 0 〃	4 4	5 10	10 2	
311	Cassie, A.	〃	9	2	230 0 0 〃	4 4	16 10	21 2	
312	Wright, W. A. H.	〃	9	2	230 0 0 〃	4 4	10 1	14 5	
313	Lawson, J.	〃	9	2	230 0 0 〃	30 5	..	30 5	
314	Beere, G. B.	〃	9	2	230 0 0 〃	23 10	..	23 10	
315	Williamson, J. M.	〃	9	1	215 0 0 〃	18 1	6 10	18 1	
316	Vernazoni, F.	〃	9	2	230 0 0 〃	28 2	..	28 2	
317	Jull, J. W.	Ticket Inspector	9	2	230 0 0 〃	32 3	..	32 3	
318	Smith, J.	Coaching Foreman	9	2	230 0 0 〃	27 10	..	27 10	
319	Berrill, E. W.	Ticket Inspector	9	2	230 0 0 〃	26 6	0 6	27 0	
320	Roulston, N.	〃	9	2	230 0 0 〃	22 4	8 1	30 5	
321	Hannagan, C. J. F.	〃	9	2	230 0 0 〃	25 7	0 6	26 1	
322	Frost, G. S.	〃	9	2	230 0 0 〃	24 2	..	24 2	
323	Robb, W. V.	〃	9	2	230 0 0 〃	24 6	..	24 6	
324	Winton, J. S.	Coaching Foreman	9	2	230 0 0 〃	29 11	..	29 11	
325	Stone, J.	Ticket Inspector	9	2	230 0 0 〃	26 5	..	26 5	
326	Lowe, H. H.	〃	9	2	230 0 0 〃	23 4	..	23 4	
327	Hiskens, D. C.	Goods Foreman	9	2	230 0 0 〃	23 6	..	23 6	
328	Reid, J.	〃	9	2	230 0 0 〃	30 11	1 10	30 11	
329	Johnston, W. H.	Workshop Foreman	9	2	230 0 0 〃	21 8	..	21 8	
330	Trevella, J.	Assist. Loco. Foreman	9	2	230 0 0 〃	36 6	..	36 6	
331	Cox, W.	Goods Foreman	9	2	230 0 0 〃	22 4	..	22 4	
332	Hampton, R.	Coaching Foreman	9	2	230 0 0 〃	27 9	..	27 9	
333	Hill, R.	Ticket Inspector	9	2	230 0 0 〃	30 2	..	30 2	
334	Twidle, T. S.	Goods Foreman	9	2	230 0 0 〃	29 7	..	29 7	
335	Jenkins, E. J.	Workshop Foreman	9	2	230 0 0 〃	24 3	3 1	24 3	
336	Rogers, E. A.	〃	9	2	230 0 0 〃	18 11	6 10	26 0	
337	Vance, M.	Clerk	9	2	230 0 0 〃	16 2	..	16 2	
338	Brown, G. L.	〃	9	2	230 0 0 〃	16 1	..	16 1	
339	McNeil, A.	Stationmaster	9	2	230 0 0 〃	16 1	..	16 1	
340	Berry, C. G. G.	Draftsman	9	1	215 0 0 〃	11 0	5 11	16 11	
341	Tomkies, E. A.	Electric-lines Inspector	9	1	215 0 0 〃	11 5	0 2	11 8	
342	Keenan, P. St. J.	Staff Officer (Transport Corps)	9	1	215 0 0 〃	1 day	4 5	..	
1	Evans, A. R.	Clerk	10	7	200 0 0 〃	21 0	..	21 0	
2	Russell, C.	〃	10	7	200 0 0 〃	28 11	0 1	29 0	
3	Gaw, A.	Stationmaster	10	7	200 0 0 〃	29 2	..	29 2	
4	Petre, R. G.	Clerk	10	7	200 0 0 〃	17 10	..	17 10	
5	Kelly, D. T.	〃	10	7	190 0 0 〃	33 0	..	33 0	
6	Haden, W.	〃	10	7	200 0 0 〃	21 11	7 1	29 0	
7	Hamlin, B. J.	Stationmaster	10	7	200 0 0 〃	34 9	..	34 9	
8	Rodgers, J. P.	〃	10	7	200 0 0 〃	29 10	..	29 10	
9	Bell, P.	Clerk	10	7	200 0 0 〃	29 5	0 3	29 8	
10	Dawson, F. S.	〃	10	7	200 0 0 〃	26 11	0 4	27 3	
11	Belworthy, A. J.	〃	10	7	200 0 0 〃	26 9	3 2	30 0	
12	Hill, J. R.	Stationmaster	10	7	200 0 0 〃	23 2	..	23 2	
13	Riordan, J.	Clerk	10	7	200 0 0 〃	35 11	..	35 11	
14	Fleming, R. J. H.	〃	10	7	200 0 0 〃	30 11	..	30 11	
15	Tregear, J. H.	〃	10	7	200 0 0 〃	21 9	12 6	34 3	
16	Truman, T. H.	〃	10	7	200 0 0 〃	23 5	..	23 5	
17	Sutherland, B.	〃	10	7	200 0 0 〃	22 7	..	22 7	
18	White, C. J.	Stationmaster	10	7	200 0 0 〃	22 5	..	22 5	
19	Kidd, R.	Clerk	10	7	200 0 0 〃	21 8	..	..	
20	Parsons, F. C. A.	Stationmaster	10	7	200 0 0 〃	21 8	..	21 8	
21	McNicol, W.	〃	10	7	200 0 0 〃	20 11	..	20 11	
22	Stürmer, J. H. von	〃	10	7	200 0 0 〃	20 11	..	20 11	
23	Durkin, J.	Clerk	10	7	200 0 0 〃	20 10	..	20 10	
24	Ancell, M. C.	Stationmaster	10	7	200 0 0 〃	19 11	..	19 11	
25	Burr, H. E.	Clerk	10	7	200 0 0 〃	34 7	..	34 7	
26	McKeown, P.	〃	10	7	200 0 0 〃	17 9	..	17 9	
27	Stevens, T. E.	〃	10	7	200 0 0 〃	18 3	..	18 3	
28	King, J. A.	〃	10	7	200 0 0 〃	17 6	..	17 6	
29	Williamson, T. H. C.	〃	10	7	200 0 0 〃	16 10	..	16 10	
30	Harvey, W. J. P.	〃	10	7	200 0 0 〃	11 7	0 5	12 0	
31	Frater, A.	Stationmaster	10	7	200 0 0 〃	11 7	0 6	12 1	
32	Gosman, A. D. C.	Clerk	10	7	200 0 0 〃	10 2	3 0	13 2	

Railway Department Classification, 1913—*continued*.

Prog. No.	Name.	Classification.							Service			Remarks.
		Designation.	Grade.	Subgrade.	Salary.				Since last appointed.	Prior to Date last appointed.	For Superannuation Purposes.	
					£	s.	d.		. M.	Y. M.	Y. M.	

FIRST DIVISION—*continued*.

Subdivision II—*continued*.

Salaried Staff not otherwise specified—continued.

Prog. No.	Name.	Designation.	Grade.	Subgrade.	£	s.	d.		Since last appointed.	Prior to Date last appointed.	For Superannuation Purposes.	Remarks.
33	Franklin, H. W.	Clerk	10	7	200	0	0	per ann.	16 1	..	16 1	
34	Fletcher, P. E.	〃	10	7	200	0	0	〃	16 1	..	16 1	
35	Jolly, L. C.	Stationmaster	10	7	200	0	0	〃	16 1	..	16 1	
36	Gilchrist, F. W.	〃	10	7	200	0	0	〃	16 1	..	16 1	
37	Curtis, W. E.	Clerk	10	7	200	0	0	〃	10 0	0 10	10 10	
38	Tuohy, T. H.	Stationmaster	10	7	200	0	0	〃	16 0	..	16 0	
39	Fleming, H. H.	〃	10	7	200	0	0	〃	16 0	..	16 0	
40	Chandler, T. F.	〃	10	7	200	0	0	〃	16 0	..	16 0	
41	Möller, A. W.	〃	10	7	200	0	0	〃	15 11	..	15 11	
42	McKeown, B. M.	〃	10	7	200	0	0	〃	15 10	..	15 10	
43	Worthington, J.	Clerk	10	7	200	0	0	〃	9 10	0 10	10 8	
44	Dayman, J. W.	〃	10	7	200	0	0	〃	15 10	..	15 10	
45	Aekins, L.	Stationmaster	10	7	200	0	0	〃	15 10	..	15 10	
46	Brown, E. C.	〃 (Taupiri)	10	7	200	0	0	〃	15 10	..	15 10	
47	Egan, J.	〃	10	7	200	0	0	〃	15 10	..	15 10	
48	Brown, A. C.	〃	10	7	200	0	0	〃	15 9	..	15 9	
49	Dyne, A. K.	〃	10	7	200	0	0	〃	9 9	..	9 9	
50	Gibson, H. L.	〃	10	7	200	0	0	〃	15 9	..	15 9	
51	Voltz, L. A.	Clerk	10	7	200	0	0	〃	15 9	0 3	16 0	
52	Stewart, J. S.	〃	10	7	200	0	0	〃	15 9	..	15 9	
53	Callaway, S. T.	〃	10	7	200	0	0	〃	9 9	3 2	12 11	
54	Laws, E. V.	〃	10	7	200	0	0	〃	11 0	4 8	15 8	
55	McSherry, D.	Stationmaster	10	7	200	0	0	〃	15 8	..	15 8	
56	Sharkay, J.	〃	10	7	200	0	0	〃	15 8	..	15 8	
57	Nolan, W. P.	〃	10	7	200	0	0	〃	15 7	..	15 7	
58	Wallace, J. S.	〃	10	7	200	0	0	〃	15 7	..	15 7	
59	McKeowen, H.	Clerk	10	7	200	0	0	〃	15 7	..	15 7	
60	Hawkins, L. W.	〃	10	7	200	0	0	〃	9 7	2 5	12 0	
61	Dougan, W. J. K.	Stationmaster	10	7	200	0	0	〃	15 7	..	15 7	
62	Seabright, C. E.	〃	10	7	200	0	0	〃	15 10	..	15 10	
63	Campbell, A. S.	〃	10	7	200	0	0	〃	15 6	..	15 6	
64	Paton, G.	〃	10	7	200	0	0	〃	15 6	..	15 6	
65	Ward, N. G.	Clerk	10	7	200	0	0	〃	15 9	..	15 9	
66	Devereux, C. L.	Stationmaster	10	7	200	0	0	〃	15 6	0 11	15 6	
67	McKenzie, J.	〃	10	7	200	0	0	〃	23 6	..	23 6	
68	Wallace, J. W.	Clerk	10	3	150	0	0	〃	16 0	..	16 0	
69	Pawson, W. E.	〃	10	7	200	0	0	〃	20 1	..	20 1	
70	Lancaster, W. A.	〃	10	7	200	0	0	〃	15 4	..	15 4	
71	Valentine, H.	Stationmaster	10	7	200	0	0	〃	14 10	..	14 10	
72	Felton, C. C.	Clerk	10	7	200	0	0	〃	9 4	2 8	12 0	
73	Tosswill, A. F.	〃	10	7	200	0	0	〃	9 4	2 4	11 8	
74	Cracknell, W. H.	Stationmaster	10	7	200	0	0	〃	15 4	..	15 4	
75	Harris, J. W.	Clerk	10	7	200	0	0	〃	15 4	..	15 4	
76	Peek, B. L.	Stationmaster	10	7	200	0	0	〃	15 4	..	15 4	
77	Doyle, S. C.	〃	10	7	200	0	0	〃	15 4	..	15 4	
78	Arthur, J. A.	〃	10	7	200	0	0	〃	21 11	..	21 11	
79	Schneider, J. C.	Clerk	10	7	200	0	0	〃	15 3	..	15 3	
80	Fowke, C. E.	Stationmaster (Herbert)	10	7	200	0	0	〃	22 9	..	22 9	
81	Johnson, A. J.	〃	10	7	200	0	0	〃	9 3	1 5	10 8	
82	Cockburn, T.	〃	10	7	200	0	0	〃	22 4	..	22 4	
83	McCarthy, J. C.	Clerk	10	7	200	0	0	〃	15 2	..	15 2	
84	Millington, S. S.	〃	10	7	200	0	0	〃	15 1	..	15 1	
85	Cahill, E. J.	Stationmaster	10	7	200	0	0	〃	15 0	..	15 0	
86	Spiller, A. F.	Clerk	10	7	200	0	0	〃	15 6	0 1	15 6	
87	Schierning, W.	Stationmaster	10	7	200	0	0	〃	15 0	..	15 0	
88	Wright, J. H.	Clerk	10	7	200	0	0	〃	15 0	..	15 0	
89	Moore, G.	〃	10	7	200	0	0	〃	15 0	..	15 0	
90	Westmoreland, J. F.	〃	10	7	200	0	0	〃	15 0	..	15 0	
91	Miller, W. J.	〃	10	7	200	0	0	〃	15 0	..	15 0	
92	Paterson, J.	Stationmaster	10	7	200	0	0	〃	15 0	..	15 0	
93	Smith, J. W. M.	Clerk	10	7	200	0	0	〃	15 0	..	15 0	
94	Stansell, L. B.	Stationmaster	10	7	200	0	0	〃	15 0	..	15 0	
95	Crampton, F. G.	〃	10	7	200	0	0	〃	15 0	..	15 0	
96	Aitken, J.	〃 (Dipton)	10	7	200	0	0	〃	14 11	..	14 11	
97	Buckley, T.	Clerk	10	7	200	0	0	〃	22 11	0 2	22 11	
98	Gough, W. W.	〃	10	7	200	0	0	〃	14 11	0 10	15 9	
99	Carter, W. P. L.	〃	10	7	200	0	0	〃	14 11	..	14 11	
100	Stewart, G. G.	〃	10	7	200	0	0	〃	14 11	..	14 11	
101	Guthrie, E. J.	Stationmaster	10	7	200	0	0	〃	14 10	..	14 10	
102	Bateman, T. J. W.	〃	10	7	200	0	0	〃	14 10	..	14 10	
103	Wells, K. C.	〃	10	7	200	0	0	〃	14 10	..	14 10	
104	Wakelin, L. T.	Clerk	10	7	200	0	0	〃	14 10	..	14 10	
105	Cullen, F. C.	Stationmaster	10	7	200	0	0	〃	14 10	..	14 10	
106	Hall, G. F.	Clerk	10	7	200	0	0	〃	14 9	..	14 9	
107	Carter, E. W. E.	Clerk	10	7	200	0	0	〃	14 9	..	14 9	
108	Reynolds, G. H.	〃	10	7	200	0	0	〃	14 11	..	14 11	

RAILWAY DEPARTMENT CLASSIFICATION, 1913—*continued.*

FIRST DIVISION—*continued.*

SUBDIVISION II—*continued.*

Salaried Staff not otherwise specified—continued.

Prog. No.	Name.	Classification.				Service			Remarks.
		Designation.	Grade.	Subgrade.	Salary.	Since last appointed.	Prior to Date last appointed.	For Superannuation Purposes.	
					£ s. d.	Y. M.	Y. M.	Y. M.	
109	Field, F.	Stationmaster	10	7	200 0 0 per ann.	22 6	..	22 6	
110	Kirkwood, G. H.	Clerk	10	7	200 0 0 "	14 8	..	14 8	
111	Millington, C. W.	"	10	7	200 0 0 "	14 8	..	14 8	
112	Brown, P. L.	Stationmaster	10	7	200 0 0 "	14 7	..	14 7	
113	Brittenden, E. S.	"	10	7	200 0 0 "	14 7	..	14 7	
114	Christie, A. M. G.	"	10	7	200 0 0 "	14 7	..	14 7	
115	Hicks, S. W.	Clerk	10	7	200 0 0 "	23 1	..	23 1	
116	Wilson, G. T.	Stationmaster	10	7	200 0 0 "	14 1	..	14 1	
117	O'Brien, W. H. J.	"	10	7	200 0 0 "	14 7	..	14 7	
118	Couch, H. C.	"	10	7	200 0 0 "	14 7	..	14 7	
119	Jacobson, J. L.	"	10	7	200 0 0 "	14 7	..	14 7	
120	Lindsay, J. A.	Clerk	10	7	200 0 0 "	14 6	0 5	14 11	
121	Horsnell, H. S.	Stationmaster	10	7	200 0 0 "	14 6	..	14 6	
122	Ryan, F. L. S.	"	10	7	200 0 0 "	14 6	..	14 6	
123	Harmston, M. E.	Clerk	10	7	200 0 0 "	14 6	..	14 6	
124	Terry, T. E.	"	10	7	200 0 0 "	14 5	..	14 5	
125	Miller, E. J.	"	10	7	200 0 0 "	14 5	..	14 5	
126	Lawless, T.	"	10	7	200 0 0 "	14 5	..	14 5	
127	Macdonald, A.	"	10	7	200 0 0 "	14 5	..	14 5	
128	Hunter, J. H.	"	10	7	200 0 0 "	14 5	..	14 5	
129	May, A. J.	Stationmaster	10	7	200 0 0 "	14 5	..	14 5	
130	Gardiner, J. J. F.	Clerk	10	7	200 0 0 "	14 4	..	14 4	
131	Ewart, N. P. G.	"	10	7	200 0 0 "	14 4	..	14 4	
132	Fraser, J. D.	"	10	7	200 0 0 "	14 4	..	14 4	
133	St. George, D.	"	10	7	200 0 0 "	14 4	..	14 4	
134	Williams, R. H.	Stationmaster	10	7	200 0 0 "	14 4	..	14 4	
135	Pettit, C. L.	Clerk	10	7	200 0 0 "	14 1	..	14 1	
136	O'Brien, W. B.	"	10	7	200 0 0 "	14 4	..	14 4	
137	Sentch, G. L.	Stationmaster	10	7	200 0 0 "	14 4	..	14 4	
138	Huse, F. C. G.	"	10	7	200 0 0 "	14 4	..	14 4	
139	Pepper, D. J.	"	10	7	200 0 0 "	14 4	..	14 4	
140	Patterson, R. F.	"	10	7	200 0 0 "	14 4	..	14 4	
141	Gifford, A. J.	Clerk	10	7	200 0 0 "	14 3	..	14 3	
142	Roberts, J. P.	Stationmaster	10	7	200 0 0 "	15 3	..	15 3	
143	Edwards, C. G.	Clerk	10	7	200 0 0 "	8 2	13 7	8 9	
144	Rasmussen, J. F. G.	"	10	7	200 0 0 "	14 2	..	14 2	
145	McDonnell, A.	"	10	7	200 0 0 "	14 1	..	14 1	
146	Brennan, D. P.	"	10	7	200 0 0 "	14 1	..	14 1	
147	Ward, N. J.	"	10	7	200 0 0 "	14 0	..	14 0	
148	Urquhart, A.	Stationmaster	10	7	200 0 0 "	14 0	..	14 0	
149	Weavers, A. H.	Stationmaster	10	7	200 0 0 "	14 0	..	14 0	
150	Brebner, R. B.	Clerk	10	7	200 0 0 "	14 0	..	14 0	
151	Nash, J. D.	"	10	7	200 0 0 "	13 11	..	13 11	
152	McCaskey, J. A.	"	10	7	200 0 0 "	13 11	..	13 11	
153	Simon, J. P.	Stationmaster	10	7	200 0 0 "	14 11	..	14 11	
154	Butchart, T. A.	Clerk	10	7	200 0 0 "	13 10	..	13 10	
155	Hunter, L. F.	Stationmaster	10	7	200 0 0 "	13 10	..	13 10	
156	Griffith, R. M.	"	10	7	200 0 0 "	13 10	..	13 10	
157	Holmes, C. S.	Clerk	10	7	200 0 0 "	13 10	..	13 10	
158	Smart, E. A.	Stationmaster	10	7	200 0 0 "	13 10	..	13 10	
159	Pope, C. L.	"	10	7	200 0 0 "	13 10	..	13 10	
160	Kearney, P. C.	"	10	7	200 0 0 "	13 10	..	13 10	
161	Clark, A.	Clerk	10	7	200 0 0 "	13 10	..	13 10	
162	Feeney, W. J.	Assist. Relieving Officer	10	7	200 0 0 "	13 9	..	13 9	
163	Mason, J. K.	Clerk	10	7	200 0 0 "	13 9	..	13 9	
164	Paton, E. J.	"	10	7	200 0 0 "	13 2	..	13 2	
165	Woodger, W. A.	"	10	7	200 0 0 "	13 8	..	13 8	
166	Ames, H.	"	10	7	200 0 0 "	13 8	..	13 8	
167	Staunton, W. J.	Stationmaster	10	7	200 0 0 "	13 8	..	13 8	
168	Waters, F. T.	Clerk	10	7	200 0 0 "	13 7	..	13 7	
169	Northover, A. H.	"	10	7	200 0 0 "	13 7	..	13 7	
170	Monteith, J. H.	"	10	7	200 0 0 "	13 7	..	13 7	
171	Payne, W. P.	Stationmaster	10	7	200 0 0 "	13 7	..	13 7	
172	Clarkson, W. E.	Clerk	10	7	200 0 0 "	13 7	..	13 7	
173	Thompson, W. J.	"	10	7	200 0 0 "	13 6	..	13 6	
174	Fama, L. C.	"	10	7	200 0 0 "	13 0	..	13 0	
175	Rodgers, W.	Stationmaster	10	7	200 0 0 "	13 6	..	13 6	
176	Simmons, W. H.	Clerk	10	7	200 0 0 "	13 0	..	13 0	
177	Burnett, G. A. T.	Stationmaster	10	7	200 0 0 "	13 5	..	13 5	
178	Greenwood, S. I.	Clerk	10	7	200 0 0 "	13 5	..	13 5	
179	Williams, C. J.	Stationmaster	10	7	200 0 0 "	13 5	..	13 5	
180	Aldridge, A. G.	Clerk	10	7	200 0 0 "	12 11	..	12 11	
181	Lee, W. B.	"	10	7	200 0 0 "	12 10	..	12 10	
182	Cole, W. M.	"	10	7	200 0 0 "	13 4	..	13 4	
183	Thomas, F.		10	7	200 0 0 "	13 4	..	13 4	

Railway Department Classification, 1913—*continued.*

FIRST DIVISION—*continued.*

Subdivision II—*continued.*

Salaried Staff not otherwise specified—continued.

Prog. No.	Name.	Classification.				Service			Remarks.
		Designation.	Grade.	Subgrade.	Salary.	Since last appointed.	Prior to Date last appointed.	For Superannuation Purposes.	
					£ s. d.	Y. M.	Y. M.	Y. M.	
184	Lee, I.	Stationmaster	10	7	200 0 0 per ann.	13 4	..	13 4	
185	Francis, R. A. P.	Clerk	10	7	200 0 0 „	13 4	..	13 4	
186	Kerr, J.	„	10	7	200 0 0 „	12 10	..	12 10	
187	Hadfield, C. W. W.	Stationmaster	10	7	200 0 0 „	13 4	..	13 4	
188	Breeze, E. S.	Clerk	10	7	200 0 0 „	13 4	..	13 4	
189	Fuller, W.	Stationmaster	10	7	200 0 0 „	13 4	..	13 4	
190	Stewart, W. G.	Clerk	10	7	200 0 0 „	13 1	..	13 1	
191	Goonan, H. E.	Stationmaster	10	7	200 0 0 „	13 3	..	13 3	
192	Undrill, C. A.	„	10	7	200 0 0 „	13 3	..	13 3	
193	Roskruge, E. R.	Clerk	10	7	200 0 0 „	13 3	..	13 3	
194	Robertson, John R.	„	10	7	200 0 0 „	13 3	..	13 3	
195	Whisker, N. E.	Stationmaster	10	7	200 0 0 „	13 3	..	13 3	
196	O'Neil, J.	Clerk	10	7	200 0 0 „	13 2	..	13 2	
197	McGonagle, C. G.	„	10	7	200 0 0 „	13 8	..	13 8	
198	McCaul, A. J.	„	10	7	200 0 0 „	12 8	..	12 8	
199	Mackley, G. H.	Assist. Relieving Officer	10	7	200 0 0 „	13 2	..	13 2	
200	Gaw, S. E. A.	„	10	7	200 0 0 „	13 2	..	13 2	
201	O'Connor, M.	„	10	7	200 0 0 „	13 2	..	13 2	
202	Short, J.	„	10	7	200 0 0 „	13 2	..	13 2	
203	Sherwood, F. M.	Clerk	10	7	200 0 0 „	12 8	..	12 8	
204	Comrie, H. P.	„	10	7	200 0 0 „	13 2	..	13 2	
205	Miles, J. W. E.	„	10	7	200 0 0 „	13 2	..	13 2	
206	Connell, D. E.	Stationmaster	10	7	200 0 0 „	13 2	..	13 2	
207	Sinclair, W.	Clerk	10	7	200 0 0 „	13 2	..	13 2	
208	Lockie, N. J.	Stationmaster	10	7	200 0 0 „	13 2	..	13 2	
209	Davies, J.	„	10	7	200 0 0 „	12 8	..	12 8	
210	Blackmore, I. W.	Clerk	10	7	200 0 0 „	13 1	..	13 1	
211	Cassey, W. H.	Stationmaster	10	7	200 0 0 „	13 1	..	13 1	
212	Jory, G. J.	„	10	7	200 0 0 „	13 1	..	13 1	
213	Stratford, J. F.	Clerk	10	7	200 0 0 „	13 1	..	13 1	
214	Henderson, A.	„	10	7	200 0 0 „	13 1	..	13 1	
215	Pugh, L. H.	„	10	7	200 0 0 „	13 0	..	13 0	
216	Brabiner, J.	„	10	7	200 0 0 „	12 6	..	12 6	
217	Barron, W. W.	„	10	7	200 0 0 „	24 2	..	24 2	
218	Rennie, W.	„	10	7	200 0 0 „	18 5	11 2	18 5	
219	Pringle, J.	Stationmaster	10	7	200 0 0 „	22 0	..	22 0	
220	Cameron, T.	Timber Checker	10	7	200 0 0 „	18 0	4 3	18 7	
221	Harrison, R.	Clerk	10	7	200 0 0 „	23 7	..	23 7	
222	Campbell, L. H.	„	10	7	200 0 0 „	13 0	..	13 0	
223	Molloy, P. H.	„	10	7	200 0 0 „	13 0	..	13 0	
224	Hargreaves, A. E.	„	10	7	200 0 0 „	13 0	..	13 0	
225	White, P.	Assist. Relieving Officer	10	7	200 0 0 „	13 0	..	13 0	
226	Ryall, J.	Stationmaster	10	6	190 0 0 „	13 0	..	13 0	
227	Whitelaw, W.	Clerk	10	7	200 0 0 „	13 0	..	13 0	
228	Leopard, J. H.	„	10	7	200 0 0 „	12 0	..	12 0	
229	Barker, J.	Stationmaster	10	7	200 0 0 „	13 0	..	13 0	
230	Greig, W. J.	Clerk	10	7	200 0 0 „	12 11	..	12 11	
231	Orton, A.	Stationmaster	10	7	200 0 0 „	12 11	..	12 11	
232	Muir, P. M.	Clerk	10	7	200 0 0 „	12 5	..	12 5	
233	Lincoln, A. D.	„	10	7	200 0 0 „	12 11	..	12 11	
234	Langrish, H. J.	Stationmaster	10	7	200 0 0 „	12 11	..	12 11	
235	Bradley, P. A. T.	„	10	7	200 0 0 „	12 11	..	12 11	
236	Raines, F. J.	Clerk	10	7	200 0 0 „	12 10	..	12 10	
237	McKenzie, J. C.	„	10	7	200 0 0 „	12 10	..	12 10	
238	Wright, P. J.	„	10	7	200 0 0 „	12 10	..	12 10	
239	Doig, W. T.	„	10	7	200 0 0 „	12 10	..	12 10	
240	Meyenberg, W. R.	„	10	7	200 0 0 „	12 9	0 3	13 0	
241	Davis, J. D. C.	„	10	7	200 0 0 „	12 9	..	12 9	
242	Barnes, C. E.	Stationmaster	10	7	200 0 0 „	12 8	0 5	13 1	
243	Wellsted, A. W.	Clerk	10	7	200 0 0 „	12 8	..	12 8	
244	Hilliard, F.	Stationmaster	10	7	200 0 0 „	12 8	..	12 8	
245	Hanlon, L. W.	Clerk	10	7	200 0 0 „	12 8	0 6	13 2	
246	Lawson, G. T.	„	10	7	200 0 0 „	12 8	..	12 8	
247	Green, D. A.	„	10	7	200 0 0 „	12 8	0 3	12 11	
248	McKay, W. E.	Stationmaster	10	7	200 0 0 „	12 7	..	12 7	
249	Britten, A. E.	Clerk	10	7	200 0 0 „	12 6	..	12 6	
250	Boult, A. A. B.	„	10	7	200 0 0 „	12 7	..	12 7	
251	Munro, W. J.	„	10	7	200 0 0 „	12 6	..	12 6	
252	Phaup, T. W.	„	10	7	200 0 0 „	12 6	..	12 6	
253	Bland, A. J.	„	10	6	190 0 0 „	12 6	0 9	13 3	
254	Jenkins, R.	Stationmaster	10	7	200 0 0 „	22 1	..	22 1	
255	Burgess, S. S.	Clerk	10	7	200 0 0 „	12 6	..	12 6	
256	Sherburd, E. H. C.	„	10	7	200 0 0 „	12 6	..	12 6	
257	Legg, C. A.	Stationmaster	10	7	200 0 0 „	12 6	..	12 6	
258	Fitzpatrick, A. F.	Clerk	10	7	200 0 0 „	12 6	..	12 6	
259	Edwards, L. E. B.	Stationmaster	10	7	200 0 0 „	12 6	..	12 6	

Railway Department Classification, 1913—*continued.*

FIRST DIVISION—*continued.*

Subdivision II—*continued.*

Salaried Staff not otherwise specified—continued.

Prog. No.	Name.	Classification.				Service			Remarks.
		Designation.	Grade.	Subgrade.	Salary.	Since last appointed.	Prior to Date last appointed.	For Superannuation Purposes.	
					£ s. d.	Y. M.	Y. M.	Y. M.	
260	Peters, A. L.	Clerk	10	7	200 0 0 per ann.	12 6	..	12 6	
261	Hayes, J.	„	10	6	190 0 0 „	12 6	..	12 6	
262	Broad, C. O. E.	„	10	5	180 0 0 „	12 6	..	12 6	
263	Short, T.	„	10	7	200 0 0 „	12 6	..	12 6	
264	McKeowen, J. P.	„	10	7	200 0 0 „	12 0	..	12 0	
265	Curry, J.	Stationmaster	10	7	200 0 0 „	12 5	..	12 5	
266	Reehal, C. T.	Assist. Relieving Officer	10	7	200 0 0 „	11 11	..	11 11	
267	Hamilton, H. E.	Clerk	10	7	200 0 0 „	12 5	..	12 5	
268	Roche, J.	Assist. Relieving Officer	10	7	200 0 0 „	12 5	..	12 5	
269	Jackson, G. G. J. S.	Clerk	10	7	200 0 0 „	12 5	..	12 5	
270	Gee, A.	„	10	7	200 0 0 „	12 5	..	12 5	
271	Bracewell, W. S. S.	Assist. Relieving Officer	10	7	200 0 0 „	12 5	..	12 5	
272	Smith, W.	Clerk	10	6	190 0 0 „	12 5	..	12 5	
273	Porteous, J. M.	„	10	7	200 0 0 „	12 4	..	12 4	
274	Garlick, P.	Stationmaster	10	6	190 0 0 „	12 4	..	12 4	
275	Harbidge, J. J.	Assist. Relieving Officer	10	7	200 0 0 „	12 4	..	12 4	
276	Smith, L. H. C.	Stationmaster	10	6	190 0 0 „	12 4	..	12 4	
277	Cooper, W. E.	Clerk	10	7	200 0 0 „	12 4	..	12 4	
278	Donovan, C. A.	Assist. Relieving Officer	10	7	200 0 0 „	12 4	..	12 4	
279	Munro, D.	Clerk	10	7	200 0 0 „	12 3	..	12 3	
280	Commons, J.	Stationmaster	10	7	200 0 0 „	12 4	..	12 4	
281	Gauntlett, J. B.	Clerk	10	7	200 0 0 „	12 4	..	12 4	
282	Austin, F. O.	„	10	7	200 0 0 „	12 3	0 2	12 5	
283	Lundon, J.	„	10	7	200 0 0 „	12 3	..	12 3	
284	Aickin, T. R.	„	10	7	200 0 0 „	11 9	..	11 9	
285	Matheson, D. M.	„	10	7	200 0 0 „	12 3	..	12 3	
286	Cunliffe, W. C.	Stationmaster	10	7	200 0 0 „	12 3	..	12 3	
287	Johnson, A.	Clerk	10	7	200 0 0 „	12 3	..	12 3	
288	Thompson, W. S.	„	10	7	200 0 0 „	12 2	..	12 2	
289	Keogh, P.	„	10	7	200 0 0 „	12 2	..	12 2	
290	Richdale, H. T.	„	10	6	190 0 0 „	10 8	..	10 8	
291	Small, R. A.	„	10	7	200 0 0 „	12 2	..	12 2	
292	Levick, A. J.	„	10	7	200 0 0 „	11 7	..	11 7	
293	Whelan, L. M.	„	10	7	200 0 0 „	12 1	..	12 1	
294	Stanton, M.	„	10	6	190 0 0 „	12 4	..	12 4	
295	Armstrong, L. G.	„	10	7	200 0 0 „	12 0	..	12 0	
296	Abraham, B.	„	10	7	200 0 0 „	12 0	..	12 0	
297	Barrett, W.	Stationmaster	10	7	200 0 0 „	12 0	..	12 0	
298	Kenning, J. A.	Clerk	10	7	200 0 0 „	12 0	..	12 0	
299	Francis, J. J.	„	10	7	200 0 0 „	13 1	..	13 1	
300	Peters, E. M.	„	10	7	200 0 0 „	12 0	..	12 0	
301	McGovern, F.	„	10	7	200 0 0 „	12 0	..	12 0	
302	Osborne, E. T. G.	„	10	6	190 0 0 „	12 0	..	12 0	
303	Cheeseman, H. E.	„	10	6	190 0 0 „	12 0	..	12 0	
304	Bishop, W.	„	10	6	190 0 0 „	11 6	..	11 6	
305	Newman, E. A.	„	10	6	190 0 0 „	12 0	..	12 0	
306	Walsh, E. J.	„	10	6	190 0 0 „	12 0	..	12 0	
307	Atchison, E. J. O.	„	10	5	180 0 0 „	11 11	..	11 11	
308	Williams, F. T. A.	„	10	6	190 0 0 „	11 5	..	11 5	
309	Chambers, G. H.	Stationmaster	10	6	190 0 0 „	11 11	..	11 11	
310	Pelling, T. H.	Clerk	10	6	190 0 0 „	11 11	..	11 11	
311	Fearn, G. H.	„	10	4	165 0 0 „	11 11	..	11 11	
312	Walker, A. T.	„	10	6	190 0 0 „	11 5	..	11 5	
313	Grant, J. G.	„	10	6	190 0 0 „	11 11	..	11 11	
314	Shepherd, J. G.	„	10	6	190 0 0 „	11 11	..	11 11	
315	Binns, S. W.	„	10	6	190 0 0 „	11 11	..	11 11	
316	Sheehan, P.	„	10	7	200 0 0 „	22 8	..	22 8	
317	Polson, G.	Stationmaster	10	6	190 0 0 „	8 10	4 1	9 2	
318	Taylor, H. B.	Clerk	10	6	190 0 0 „	11 10	..	11 10	
319	Cooper, W.	„	10	6	190 0 0 „	11 10	..	11 10	
320	Pritchard, A. J.	Stationmaster	10	6	190 0 0 „	11 10	..	11 10	
321	Curran, M.	Clerk	10	6	190 0 0 „	11 9	..	11 9	
322	Graham, R. S. A.	Stationmaster	10	6	190 0 0 „	11 9	..	11 9	
323	McDonald, W.	Clerk	10	6	190 0 0 „	11 9	..	11 9	
324	Johnston, E.	Stationmaster	10	7	200 0 0 „	22 1	..	22 1	
325	Leydon, J. L.	Stores Shipper	10	6	190 0 0 „	11 8	..	11 8	
326	White, J. M.	Clerk	10	6	190 0 0 „	11 8	..	11 8	
327	Wansbrough, A. S.	Draftsman	10	7	200 0 0 „	11 7	..	11 7	
328	Ginnane, J.	Clerk	10	6	190 0 0 „	11 7	..	11 7	
329	Venimore, V. W. W.	„	10	6	190 0 0 „	11 7	..	11 7	
330	Allwright, R. S.	„	10	6	190 0 0 „	11 7	..	11 7	
331	Sterling, H. H.	„	10	6	190 0 0 „	11 7	..	11 7	
332	Harman, C. E.	„	10	6	190 0 0 „	11 7	..	11 7	
333	Stirling, R. J. A.	„	10	6	190 0 0 „	11 7	..	11 7	
334	Wilson, J.	„	10	5	180 0 0 „	11 9	..	11 9	
335	Cundy, J. A. F.	„	10	6	190 0 0 „	11 6	..	11 6	

Railway Department Classification, 1913—*continued.*

FIRST DIVISION—*continued.*

Subdivision II—*continued.*

Salaried Staff not otherwise specified—continued.

Prog. No.	Name.	Classification.				Service			Remarks.
		Designation.	Grade.	Subgrade.	Salary.	Since last appointed.	Prior to Date last appointed.	For Superannuation Purposes.	
					£ s. d.	Y. M.	Y. M.	Y. M.	
336	Dixon, R. C.	Clerk	10	6	190 0 0 per ann.	12 2	..	12 2	
337	Heaton, E. D. H.	„	10	6	190 0 0 „	11 6	..	11 6	
338	Cassidy, J. P.	„	10	6	190 0 0 „	11 10	..	11 10	
339	Leggett, A. E.	„	10	6	190 0 0 „	11 0	..	11 0	
340	Bray, B. R.	„	10	6	190 0 0 „	11 5	..	11 5	
341	Bond, W. F.	„	10	6	190 0 0 „	11 5	..	11 5	
342	Thomas, C. W.	„	10	6	190 0 0 „	11 5	..	11 5	
343	McLean, G. H.	Assist. Relieving Officer	10	6	190 0 0 „	10 10	..	10 10	
344	White, N. E.	Clerk	10	6	190 0 0 „	10 10	..	10 10	
345	Entwisle, W. R.	„	10	6	190 0 0 „	11 4	..	11 4	
346	Stead, R. M.	„	10	6	190 0 0 „	11 4	..	11 4	
347	Willis, H. J.	Stationmaster	10	7	200 0 0 „	21 1	..	21 1	
348	Ramsbottom, T.	Clerk	10	7	200 0 0 „	12 9	..	12 9	
349	Pascoe, H. W.	Stationmaster	10	6	190 0 0 „	11 4	..	11 4	
350	Kane, T. P.	Clerk	10	6	190 0 0 „	11 5	..	11 5	
351	Bromley, F. L.	Assist. Relieving Officer	10	6	190 0 0 „	11 10	..	11 10	
352	Johnston, C. W.	Clerk	10	6	190 0 0 „	23 9	..	23 9	
353	Barnett, J.	„	10	6	190 0 0 „	11 2	..	11 2	
354	Fraser, G. V. R.	Draftsman	10	6	190 0 0 „	13 5	..	13 5	
355	Reid, G. S.	Clerk	10	6	190 0 0 „	11 1	..	11 1	
356	Familton, B. A. R.	Assist. Relieving Officer	10	6	190 0 0 „	11 1	..	11 1	
357	Rees, H. A.	Clerk	10	6	190 0 0 „	12 10	..	12 10	
358	Champion, G. T	„	10	6	190 0 0 „	11 0	..	11 0	
359	Murray, T. B.	„	10	5	180 0 0 „	11 0	..	11 0	
360	Bearsley, C.	„	10	6	190 0 0 „	12 0	..	12 0	
361	Hardie, V. C.	„	10	6	190 0 0 „	10 11	..	10 11	
362	Pedler, F. C.	„	10	6	190 0 0 „	11 2	..	11 2	
363	McKenzie, C. D.	Stationmaster	10	6	190 0 0 „	10 10	..	10 10	
364	Anderson, G. L.	Clerk	10	6	190 0 0 „	10 10	..	10 10	
365	Gill, A. E.	Stationmaster	10	6	190 0 0 „	10 10	..	10 10	
366	Soulsby, R. W.	Clerk	10	6	190 0 0 „	10 9	..	10 9	
367	Brady, F. P.	Stationmaster	10	6	190 0 0 „	10 9	..	10 9	
368	Hutt, T. E.	Clerk	10	5	180 0 0 „	10 9	..	10 9	
369	Scoullar, J. S.	„	10	6	190 0 0 „	10 9	..	10 9	
370	Sullivan, L.	„	10	6	190 0 0 „	10 8	..	10 8	
371	Parkes, A. T.	„	10	6	190 0 0 „	10 8	..	10 8	
372	Craig, F. G.	„	10	6	190 0 0 „	10 8	..	10 8	
373	Woodlock, W. J.	„	10	6	190 0 0 „	10 7	..	10 7	
374	McLeod, W.	„	10	6	190 0 0 „	10 11	..	10 11	
375	Woods, J. F. W.	„	10	6	190 0 0 „	10 6	2 7	13 1	
376	McLean, T. H.	„	10	6	190 0 0 „	10 0	..	10 0	
377	Aitken, C.	„	10	6	190 0 0 „	9 11	..	9 11	
378	Casey, E.	Draftsman	10	7	200 0 0 „	10 5	..	10 5	
379	Taylor, A. G.	Clerk	10	5	180 0 0 „	10 4	..	10 4	
380	O'Reilly, W.	„	10	6	190 0 0 „	10 4	..	10 4	
381	Palmer, A.	Assist. Relieving Officer	10	6	190 0 0 „	10 3	..	10 3	
382	Cleary, P. E.	Clerk	10	6	190 0 0 „	10 3	..	10 3	
383	Pratt, A. M.	„	10	5	180 0 0 „	9 9	..	9 9	
384	Wilson, R. G. J.	„	10	6	190 0 0 „	10 3	..	10 3	
385	Lee, H.	Stationmaster	10	6	190 0 0 „	10 3	..	10 3	
386	Smith, A. L.	Assist. Relieving Officer	10	6	190 0 0 „	10 3	..	10 3	
387	Linehan, J.	Clerk	10	6	190 0 0 „	10 3	..	10 3	
388	Marshall, L. L.	„	10	6	190 0 0 „	10 2	..	10 2	
389	Brown, A. C.	„ (Addington)	10	6	190 0 0 „	10 2	..	10 2	
390	Stringleman, E. S.	„	10	5	180 0 0 „	12 0	..	12 0	
391	Macdonald, J.	„	10	6	190 0 0 „	10 2	..	10 2	
392	Stanley, V. R. J.	„	10	6	190 0 0 „	10 1	..	10 1	
393	Boyle, D.	„	10	6	190 0 0 „	10 1	..	10 1	
394	Turnbull, S. G.	„	10	6	190 0 0 „	10 1	..	10 1	
395	Hoddinott, F. J.	„	10	6	190 0 0 „	10 1	..	10 1	
396	Carnie, G. C.	„	10	6	190 0 0 „	10 1	..	10 1	
397	Rennie, W. H.	„	10	6	190 0 0 „	10 1	..	10 1	
398	Martin, W. J.	„	10	7	200 0 0 „	11 7	8 4	12 0	
399	Hutchins, T.	„	10	7	200 0 0 „	15 3	..	15 3	
400	Lovell, A. E.	„	10	7	200 0 0 „	15 9	..	15 9	
401	Sawers, A.	„	10	6	190 0 0 „	13 1	..	13 1	
402	Brown, J.	„ (Frankton Junc.)	10	7	200 0 0 „	11 2	..	11 2	
403	Bowie, R. J.	„	10	6	190 0 0 „	13 7	..	13 7	
404	Stedman, S. R.	„	10	6	190 0 0 „	10 11	..	10 11	
405	Cording, F.	„	10	7	200 0 0 „	4 4	16 2	5 6	
406	Seaward, A. T.	„	10	7	200 0 0 „	4 4	20 9	25 1	
407	Hardie, R. K. G.	„	10	7	200 0 0 „	4 4	11 9	16 1	
408	Brown, A. W.	„	10	7	200 0 0 „	4 4	6 11	11 3	
409	Cook, H. W. J.	Draftsman	10	7	200 0 0 „	4 4	7 10	12 2	
410	Crouch, F. B.	Clerk	10	7	200 0 0 „	4 4	6 6	10 10	
411	Lawrence, J. E.	„	10	3	150 0 0 „	4 4	6 11	11 3	

RAILWAY DEPARTMENT CLASSIFICATION, 1913—*continued.*

FIRST DIVISION—*continued.*

SUBDIVISION II—*continued.*

Salaried Staff not otherwise specified—continued.

Prog. No.	Name.	Classification.							Service			Remarks.
		Designation.	Grade.	Subgrade.	Salary.				Since last appointed.	Prior to Date last appointed.	For Superannuation Purposes.	
					£	s.	d.		Y. M.	Y. M.	Y. M.	
412	Finlayson, W. A.	Clerk	10	5	180	0	0	per ann.	4 4	4 11	9 3	
413	Cheesman, R. S.	〃	10	2	135	0	0	〃	4 4	7 6	11 10	
414	Stehr, A. T.	〃	10	7	200	0	0	〃	20 3	..	22 10	
415	Smith, G. F.	〃	10	6	190	0	0	〃	10 5	0 7	11 0	
416	Richards, H. R.	〃	10	5	180	0	0	〃	10 0	..	10 0	
417	Vincent, L. M.	〃	10	5	180	0	0	〃	10 0	0 4	10 4	
418	Burnett, P. J.	〃	10	4	165	0	0	〃	10 0	..	10 0	
419	Kay, J.	〃	10	5	180	0	0	〃	10 0	..	10 0	
420	Kilgour, D. B.	〃	10	5	180	0	0	〃	9 11	..	9 11	
421	Simmonds, H.	〃	10	5	180	0	0	〃	9 11	..	9 11	
422	Gallagher, C. A.	〃	10	5	180	0	0	〃	9 11	..	9 11	
423	Brice, C. L.	〃	10	5	180	0	0	〃	9 11	..	9 11	
424	Bish, E. M.	〃	10	5	180	0	0	〃	9 11	..	9 11	
425	Treahy, J. P.	〃	10	5	180	0	0	〃	9 11	..	9 11	
426	Duncan, J.	〃	10	5	180	0	0	〃	9 11	..	9 11	
427	Gillies, R. P.	〃	10	5	180	0	0	〃	9 10	..	9 10	
428	Gallagher, R.	〃	10	5	180	0	0	〃	9 10	..	9 10	
429	Patterson, L.	〃	10	5	180	0	0	〃	9 10	..	9 10	
430	Dew, N. S.	〃	10	5	180	0	0	〃	9 10	..	9 10	
431	Denz, F. C.	〃	10	5	180	0	0	〃	9 10	..	9 10	
432	Barry, C.	〃	10	5	180	0	0	〃	9 9	..	9 9	
433	Cameron, T. J.	〃	10	5	180	0	0	〃	9 9	..	9 9	
434	Thomson, G. W. G.	〃	10	5	180	0	0	〃	9 9	..	9 9	
435	McKellar, P. A.	〃	10	5	180	0	0	〃	9 9	..	9 9	
436	Finlay, D.	〃	10	5	180	0	0	〃	9 9	..	9 9	
437	Simmons, H. G. C.	〃	10	5	180	0	0	〃	9 9	..	9 9	
438	O'Connor, J.	〃	10	5	180	0	0	〃	9 9	..	9 9	
439	Garrick, T.	〃	10	4	165	0	0	〃	9 9	..	9 9	
440	Campbell, G. A.	〃	10	5	180	0	0	〃	9 9	..	9 9	
441	Sargisson, B. A.	〃	10	5	180	0	0	〃	9 9	..	9 9	
442	McCurdy, D.	〃	10	5	180	0	0	〃	9 9	..	9 9	
443	Tinsley, R. M.	〃	10	5	180	0	0	〃	9 8	..	9 8	
444	Andrews, E. C. A.	〃	10	5	180	0	0	〃	9 8	..	9 8	
445	Pattle, G. D.	〃	10	5	180	0	0	〃	9 8	..	9 8	
446	Wylde, B.	〃	10	5	180	0	0	〃	9 7	..	9 7	
447	Riordan, T. J.	〃	10	2	135	0	0	〃	9 11	..	9 11	
448	Bracefield, M. L.	〃	10	5	180	0	0	〃	9 7	..	9 7	
449	Muirhead, J. W.	〃	10	5	180	0	0	〃	9 7	..	9 7	
450	Coleman, A. I.	〃	10	5	180	0	0	〃	11 2	..	11 2	
451	Hornibrooke, W. T.	〃	10	5	180	0	0	〃	9 7	..	9 7	
452	Callick, W. S.	〃	10	5	180	0	0	〃	9 7	..	9 7	
453	Reid, W. M.	〃	10	5	180	0	0	〃	9 7	..	9 7	
454	Munro, P. A.	〃	10	5	180	0	0	〃	9 6	..	9 6	
455	Williams, E.	〃	10	5	180	0	0	〃	9 6	..	9 6	
456	Brennan, J. M.	〃	10	5	180	0	0	〃	9 5	..	9 5	
457	Smart, G. D.	〃	10	5	180	0	0	〃	9 5	..	9 5	
458	Little, W.	〃	10	4	165	0	0	〃	9 4	..	9 4	
459	Fowler, W. J. F.	〃	10	5	180	0	0	〃	9 4	..	9 4	
460	Newling, A. J.	〃	10	5	180	0	0	〃	9 4	..	9 4	
461	Cockroft, A. G.	〃	10	5	180	0	0	〃	9 3	..	9 3	
462	Innes, P. J.	〃	10	4	165	0	0	〃	9 3	..	9 3	
463	Stewart, C. W.	〃	10	4	165	0	0	〃	9 2	..	9 2	
464	Dunnett, Jas.	〃	10	5	180	0	0	〃	9 2	..	9 2	
465	Staunton, A. R.	〃	10	5	180	0	0	〃	9 2	..	9 2	
466	McMahon, T. J.	〃	10	5	180	0	0	〃	9 2	..	9 2	
467	Marshall, R.	〃	10	5	180	0	0	〃	9 2	..	9 2	
468	Latimer, A.	〃	10	5	180	0	0	〃	9 1	..	9 1	
469	Lindsay, F.	〃	10	5	180	0	0	〃	9 1	..	9 1	
470	Trask, C. H.	〃	10	5	180	0	0	〃	9 1	..	9 1	
471	White, T. G. O.	〃	10	4	165	0	0	〃	9 1	..	9 1	
472	McNeil, G.	〃	10	4	165	0	0	〃	8 7	..	8 7	
473	Bond, W. C.	〃	10	5	180	0	0	〃	9 1	..	9 1	
474	Bartos, F. R.	〃	10	5	180	0	0	〃	9 1	..	9 1	
475	Jackson, C. P. M.	〃	10	5	180	0	0	〃	9 0	..	9 0	
476	Piper, A. L.	Technical Clerk	10	7	200	0	0	〃	14 8	..	14 8	
477	Steffensen, A. G.	〃	10	7	200	0	0	〃	11 4	..	11 4	
478	Mercer, G. L.	Clerk	10	4	165	0	0	〃	9 11	..	9 11	
479	Thomson, N. S.	〃	10	5	180	0	0	〃	12 0	..	12 0	
480	de Ridder, P. G.	〃	10	4	165	0	0	〃	4 4	4 0	8 4	
481	Elias, D. D.	〃	10	3	150	0	0	〃	4 4	4 0	8 4	
482	Wilson, F. J. V.	〃	10	4	165	0	0	〃	4 4	5 0	9 4	
483	Curson, H.	〃	10	4	165	0	0	〃	9 0	..	9 0	
484	Jones, R. W.	〃	10	4	165	0	0	〃	9 0	..	9 0	
485	Petrie, A. P. F.	〃	10	4	165	0	0	〃	9 0	..	9 0	
486	Greig, R.	〃	10	4	165	0	0	〃	9 0	..	9 0	
487	Redmond, H. L. J.	〃	10	4	165	0	0	〃	8 11	..	8 11	

RAILWAY DEPARTMENT CLASSIFICATION, 1913—*continued.*

FIRST DIVISION—*continued.*

SUBDIVISION II—*continued.*

Salaried Staff not otherwise specified—continued.

Prog. No.	Name.	Classification. Designation.	Grade.	Subgrade.	Salary.	Service Since last appointed.	Service Prior to Date last appointed.	Service For Superannuation Purposes.	Remarks.
					£ s. d.	Y. M.	Y. M.	Y. M.	
488	McEnroe, P.	Clerk	10	4	165 0 0 per ann.	8 11	..	8 11	
489	Watt, G. A.	"	10	3	150 0 0 "	8 11	..	8 11	
490	Box, P.	"	10	4	165 0 0 "	8 11	..	8 11	
491	Olds, W. K.	"	10	3	150 0 0 "	8 11	..	8 11	
492	O'Shaughnessy, W. F.	"	10	4	165 0 0 "	8 11	..	8 11	
493	Bertinshaw, G. J.	Draftsman	10	5	180 0 0 "	8 11	..	8 11	
494	Sutherland, R. G.	Clerk	10	3	150 0 0 "	8 10	..	8 10	
495	Nelson, C. H.	"	10	4	165 0 0 "	8 10	..	8 10	
496	Yorston, J. W.	"	10	4	165 0 0 "	8 10	..	8 10	
497	Miller, T.	"	10	4	165 0 0 "	8 4	..	8 4	
498	Cannell, H. N.	"	10	4	165 0 0 "	8 9	..	8 9	
499	Wilton, D. E.	"	10	4	165 0 0 "	8 8	..	8 8	
500	Qualter, M. F.	"	10	4	165 0 0 "	8 8	..	8 8	
501	Stevenson, P. H.	"	10	3	150 0 0 "	8 8	..	8 8	
502	Kevern, G. M.	"	10	4	165 0 0 "	8 2	..	8 2	
503	Johnston, H. A.	"	10	4	165 0 0 "	8 8	..	8 8	
504	Harris, J. P.	"	10	4	165 0 0 "	8 8	..	8 8	
505	Mansfield, F. N.	Draftsman	10	5	180 0 0 "	8 8	..	8 8	
506	Viles, S. S.	Clerk	10	4	165 0 0 "	8 7	..	8 7	
507	Needham, J. I.	"	10	4	165 0 0 "	8 7	..	8 7	
508	Knights, P. W.	"	10	4	165 0 0 "	8 7	..	8 7	
509	Matheson, J. M.	"	10	4	165 0 0 "	8 7	..	8 7	
510	Wilson, H. H.	"	10	4	165 0 0 "	8 7	..	8 7	
511	Martin, J. P.	"	10	4	165 0 0 "	8 7	..	8 7	
512	Faris, P. C.	"	10	4	165 0 0 "	8 7	..	8 7	
513	Bollinger, H.	"	10	4	165 0 0 "	8 7	..	8 7	
514	Hornblow, H. H.	"	10	4	165 0 0 "	8 7	..	8 7	
515	Absolum, H. H.	"	10	4	165 0 0 "	8 7	..	8 7	
516	McAulay, W. J. W.	"	10	4	165 0 0 "	8 7	..	8 7	
517	Newton, H. J.	"	10	4	165 0 0 "	8 6	..	8 6	
518	McWhirter, R. B.	"	10	4	165 0 0 "	8 6	..	8 6	
519	White, T. A.	"	10	4	165 0 0 "	8 6	..	8 6	
520	McDonald, A. R.	"	10	4	165 0 0 "	8 6	..	8 6	
521	Gordon, J.	"	10	4	165 0 0 "	8 6	..	8 6	
522	Smith, E. M.	"	10	4	165 0 0 "	8 6	..	8 6	
523	Tayler, L. R.	"	10	4	165 0 0 "	8 5	..	8 5	
524	Mouat, W.	"	10	4	165 0 0 "	8 5	..	8 5	
525	Scott, C.	"	10	4	165 0 0 "	8 5	..	8 5	
526	Mitchell, D. C.	"	10	4	165 0 0 "	8 5	..	8 5	
527	Lilley, W. H.	"	10	4	165 0 0 "	8 5	..	8 5	
528	Jones, J. A.	"	10	4	165 0 0 "	7 11	..	7 11	
529	McKeown, F. H.	"	10	4	165 0 0 "	8 4	..	8 4	
530	Baker, I.	"	10	4	165 0 0 "	8 4	..	8 4	
531	Fergie, J. W.	"	10	4	165 0 0 "	8 4	..	8 4	
532	Cox, C. D.	"	10	4	165 0 0 "	8 4	..	8 4	
533	Teape, T. H. F.	"	10	4	165 0 0 "	8 4	..	8 4	
534	Young, T. E.	"	10	3	150 0 0 "	8 3	..	8 3	
535	Fitzgerald, T.	"	10	4	165 0 0 "	8 3	..	8 3	
536	McKay, N. O.	"	10	4	165 0 0 "	8 3	..	8 3	
537	Burge, P.	"	10	4	165 0 0 "	8 2	..	8 2	
538	Jackson, A. W.	"	10	4	165 0 0 "	8 1	..	8 1	
539	Henery, A. J.	"	10	4	165 0 0 "	8 1	..	8 1	
540	Christophers, H. H.	Draftsman	10	5	180 0 0 "	8 1		8 1	
541	Howie, W. J.	Clerk	10	4	165 0 0 "	8 0	..	8 0	
542	Hoskin, R. D. T.	"	10	4	165 0 0 "	8 0	..	8 0	
543	Leslie, J.	"	10	4	165 0 0 "	8 0	..	8 0	
544	Barnard, H. G.	"	10	4	165 0 0 "	8 0	..	8 0	
545	Barber, W. T.	"	10	4	165 0 0 "	8 0	..	8 0	
546	Loeber, C. D.	Assist. Refreshment-car Supervisor	10	7	200 0 0 "	2 8	5 4	8 0	
547	Walker, R. J.	Clerk	10	2	135 0 0 "	4 4	4 7	8 11	
548	Martin, J.	"	10	3	150 0 0 "	4 4	5 2	9 6	
549	Horan, W. J.	"	10	3	150 0 0 "	8 9	..	8 9	
550	Masters, A. R.	"	10	3	150 0 0 "	8 0	..	8 0	
551	Fuchs, A. J. A.	"	10	3	150 0 0 "	8 0	..	8 0	
552	Adam, W. O. S.	"	10	3	150 0 0 "	8 0	..	8 0	
553	Elliott, J. B.	"	10	3	150 0 0 "	8 0	..	8 0	
554	Lambert, A. H. G.	"	10	3	150 0 0 "	7 11	..	7 11	
555	Taylor, A. E.	"	10	3	150 0 0 "	7 11	..	7 11	
556	Burns, T. R. L.	"	10	3	150 0 0 "	7 11	..	7 11	
557	Marshall, D. C.	"	10	3	150 0 0 "	7 11	..	7 11	
558	Casey, A. B.	"	10	3	150 0 0 "	7 11	..	7 11	
559	Hawken, A. T.	"	10	3	150 0 0 "	7 11	..	7 11	
560	Langford, H. C.	"	10	3	150 0 0 "	7 11	..	7 11	
561	Hicks, J. J.	"	10	3	150 0 0 "	7 11	..	7 11	

RAILWAY DEPARTMENT CLASSIFICATION, 1913—*continued*.

FIRST DIVISION—*continued*.

SUBDIVISION II—*continued*.

Salaried Staff not otherwise specified—continued.

Prog. No.	Name.	Classification.				Service			Remarks.
		Designation.	Grade.	Subgrade.	Salary.	Since last appointed.	Prior to Date last appointed.	For Superannuation Purposes.	
					£ s. d.	Y. M.	Y. M.	Y. M.	
562	Gimson, T. J.	Clerk	10	3	150 0 0 per ann.	7 10	..	7 10	
563	Curtis, P. H.	〃	10	3	150 0 0 〃	7 10	..	7 10	
564	Turner, W.	〃	10	3	150 0 0 〃	7 10	..	7 10	
565	Smith, H. M.	〃	10	3	150 0 0 〃	7 10	..	7 10	
566	Grinter, W.	〃	10	3	150 0 0 〃	7 10	..	7 10	
567	McKay, E. C. M.	Draftsman	10	4	165 0 0 〃	7 10	..	7 10	
568	Davies, R. W.	Clerk	10	3	150 0 0 〃	7 10	..	7 10	
569	Martin, P. J.	〃	10	3	150 0 0 〃	7 10	3 2	11 0	
570	Campbell, R.	〃	10	3	150 0 0 〃	7 9	..	7 9	
571	Howard, C. C.	〃	10	3	150 0 0 〃	7 9	..	7 9	
572	Emery, L. A. J.	〃	10	3	150 0 0 〃	7 9	..	7 9	
573	Miller, A. W. I.	〃	10	3	150 0 0 〃	7 8	..	7 8	
574	Hamilton, A. M.	〃	10	3	150 0 0 〃	7 8	..	7 8	
575	Chapman, E. J.	〃	10	3	150 0 0 〃	7 8	..	7 8	
576	Spencer, R. T.	〃	10	3	150 0 0 〃	7 8	..	7 8	
577	Fanselow, H. A.	〃	10	3	150 0 0 〃	7 7	..	7 7	
578	Clark, F. G.	〃	10	3	150 0 0 〃	7 7	..	7 7	
579	Curran, J.	〃	10	3	150 0 0 〃	7 7	..	7 7	
580	Law, D. G.	〃	10	3	150 0 0 〃	7 7	..	7 7	
581	Clark, H. V. M.	〃	10	3	150 0 0 〃	7 6	..	7 6	
582	Islip, P. E.	〃	10	3	150 0 0 〃	7 6	..	7 6	
583	Simpson, S.	〃	10	3	150 0 0 〃	7 6	..	7 6	
584	Walters, C.	〃	10	3	150 0 0 〃	7 6	..	7 6	
585	Melhose, G. W.	〃	10	3	150 0 0 〃	7 6	..	7 6	
586	Smart, E. W.	〃	10	3	150 0 0 〃	6 11	..	6 11	
587	Fahy, R. A.	〃	10	3	150 0 0 〃	7 5	..	7 5	
588	McTaggart, J. A.	〃	10	3	150 0 0 〃	7 5	..	7 5	
589	Pittaway, A. T.	〃	10	3	150 0 0 〃	7 4	..	7 4	
590	McHardie, J. A.	〃	10	3	150 0 0 〃	7 4	..	7 4	
591	Hoare, G. H.	〃	10	3	150 0 0 〃	7 4	..	7 4	
592	MacCurdy, A. F. A.	〃	10	3	150 0 0 〃	7 4	..	7 4	
593	Pope, H. A.	〃	10	3	150 0 0 〃	7 4	..	7 4	
594	Cochran, R. D.	〃	10	3	150 0 0 〃	7 4	..	7 4	
595	Watson, C. W. R.	〃	10	3	150 0 0 〃	7 7	..	7 7	
596	Humphrys, J. M. W.	〃	10	3	150 0 0 〃	7 4	..	7 4	
597	Lindop, W. H.	〃	10	3	150 0 0 〃	7 3	..	7 3	
598	Brayshaw, J. E. F.	〃	10	3	150 0 0 〃	7 3	..	7 3	
599	Sullivan, M. M.	〃	10	3	150 0 0 〃	7 3	..	7 3	
600	Lythberg, A. E. W.	〃	10	3	150 0 0 〃	7 2	..	7 2	
601	Grant, L. N.	〃	10	2	135 0 0 〃	7 2	..	7 2	
602	Ness, J. J.	〃	10	3	150 0 0 〃	7 2	..	7 2	
603	Wallace, P. C.	〃	10	3	150 0 0 〃	7 2	..	7 2	
604	Mitchell, G. E.	〃	10	3	150 0 0 〃	7 2	..	7 2	
605	Wilson, C. D.	〃	10	3	150 0 0 〃	7 1	..	7 1	
606	Kennedy, H. P.	〃	10	3	150 0 0 〃	7 1	..	7 1	
607	Logie, E. H.	〃	10	3	150 0 0 〃	7 1	..	7 1	
608	Adamson, H. K.	〃	10	3	150 0 0 〃	7 1	..	7 1	
609	Rollo, A. C.	〃	10	3	150 0 0 〃	7 1	..	7 1	
610	Clemens, A. H.	〃	10	3	150 0 0 〃	7 1	..	7 1	
611	McGrail, A. J.	〃	10	3	150 0 0 〃	7 1	..	7 1	
612	Chisholm, R. G.	〃	10	3	150 0 0 〃	9 7	..	9 7	
613	Crean, P. L.	〃	10	3	150 0 0 〃	7 0	..	7 0	
614	Brennan, J.	〃	10	2	135 0 0 〃	6 4	..	6 4	
615	Byrne, J. P.	〃	10	2	135 0 0 〃	4 4	4 2	8 6	
616	Blackburn, C. L.	〃	10	2	135 0 0 〃	4 4	3 7	7 11	
617	Jamieson, R. L.	〃	10	2	135 0 0 〃	4 4	3 3	7 7	
618	Morey, P. H.	Draftsman	10	3	150 0 0 〃	7 10	..	7 10	
619	Milne, F. R.	Clerk	10	2	135 0 0 〃	7 10	2 8	10 6	
620	Blackburn, A. R.	〃	10	2	135 0 0 〃	6 11	..	6 11	
621	Beasley, H. W.	Draftsman	10	3	150 0 0 〃	6 11	..	6 11	
622	Withington, T.	Clerk	10	2	135 0 0 〃	6 11	..	6 11	
623	Croudis, R. G.	〃	10	2	135 0 0 〃	6 10	..	6 10	
624	Small, E. M. P.	〃	10	2	135 0 0 〃	6 10	..	6 10	
625	Crisp, J. D.	〃	10	2	135 0 0 〃	6 10	..	6 10	
626	Bond, A.	〃	10	2	135 0 0 〃	6 10	..	6 10	
627	Buckley, J. H.	〃	10	2	135 0 0 〃	6 9	..	6 9	
628	Mackay, W. M.	〃	10	2	135 0 0 〃	6 9	..	6 9	
629	Vigers, C. E.	〃	10	2	135 0 0 〃	6 9	..	6 9	
630	Kerr, C. J.	〃	10	2	135 0 0 〃	6 9	..	6 9	
631	Gray, F. S.	〃	10	2	135 0 0 〃	6 3	..	6 3	
632	Angus, N.	〃	10	2	135 0 0 〃	6 9	..	6 9	
633	Hawkins, G. S.	〃	10	2	135 0 0 〃	6 8	..	6 8	
634	Thomson, A. C.	〃	10	2	135 0 0 〃	5 8	..	5 8	
635	Jessen, J.	〃	10	2	135 0 0 〃	6 8	..	6 8	
636	Carmine, J. F. L.	〃	10	2	135 0 0 〃	6 8	..	6 8	

Railway Department Classification, 1913—*continued.*

FIRST DIVISION—*continued.*

Subdivision II—*continued.*

Salaried Staff not otherwise specified—continued.

Prog. No.	Name.	Classification.							Service						Remarks.
		Designation.	Grade.	Subgrade.	Salary.				Since last appointed.		Prior to Date last appointed.		For Superannuation Purposes.		
					£	s.	d.		Y.	M.	Y.	M.	Y.	M.	
637	Annibal, R. H.	Clerk	10	2	135	0	0	per ann.	6	8	..		6	8	
638	Martin, B.	„	10	2	135	0	0	„	6	8	..		6	8	
639	Smith, E.	„	10	2	135	0	0	„	6	8	..		6	8	
640	Craw, W.	„	10	2	135	0	0	„	6	8	..		6	8	
641	Mackay, F. K.	„	10	2	135	0	0	„	6	8	..		6	8	
642	Gorman, E.	„	10	2	135	0	0	„	6	8	..		6	8	
643	Colgan, F. J.	„	10	2	135	0	0	„	6	7	..		6	7	
644	Stock, E. P.	„	10	2	135	0	0	„	6	7	..		6	7	
645	McCallum, W. A.	„	10	2	135	0	0	„	6	7	..		6	7	
646	Evenden, A. H. W.	„	10	2	135	0	0	„	6	7	..		6	7	
647	Sawers, J.	„	10	2	135	0	0	„	6	7	..		6	7	
648	Wishnowsky, A. A.	„	10	2	135	0	0	„	6	7	..		6	7	
649	Clive, P. D.	„	10	2	135	0	0	„	6	7	..		6	7	
650	Jonas, C. T.	„	10	2	135	0	0	„	6	7	..		6	7	
651	Brunton, W. G.	„	10	2	135	0	0	„	6	7	..		6	7	
652	Hill, S. B.	„	10	2	135	0	0	„	6	6	..		6	6	
653	Borland, R. W.	„	10	2	135	0	0	„	6	6	..		6	6	
654	Brosnahan, D.	„	10	2	135	0	0	„	6	6	..		6	6	
655	Mason, N. C. D.	„	10	2	135	0	0	„	6	6	..		6	6	
656	Smith, A. A.	„	10	2	135	0	0	„	6	5	..		6	5	
657	Baillie, F. W.	„	10	2	135	0	0	„	6	5	..		6	5	
658	Sargent, W. J.	„	10	2	135	0	0	„	6	5	..		6	5	
659	Rae, R. J.	„	10	2	135	0	0	„	6	5	..		6	5	
660	Gembitsky, M. F. F.	„	10	2	135	0	0	„	6	4	..		6	4	
661	Harvey, W.	„	10	2	135	0	0	„	6	4	..		6	4	
662	Jenks, F. E.	„	10	2	135	0	0	„	6	4	..		6	4	
663	Hayles, R. F.	„	10	2	135	0	0	„	6	4	..		6	4	
664	Taylor, J. C.	„	10	2	135	0	0	„	6	4	..		6	4	
665	Small, F. J. D.	„	10	2	135	0	0	„	6	4	..		6	4	
666	Leggett, A. B.	„	10	2	135	0	0	„	6	4	..		6	4	
667	Gooch, L. C. H.	„	10	2	135	0	0	„	6	4	..		6	4	
668	Trower, A. S.	„	10	2	135	0	0	„	6	3	..		6	3	
669	Hancock, A. A.	„	10	2	135	0	0	„	6	3	..		6	3	
670	Maxwell, A. C.	„	10	2	135	0	0	„	6	3	..		6	3	
671	Ingpen, F. G.	„	10	2	135	0	0	„	6	3	..		6	3	
672	Harris, T. P. J.	„	10	2	135	0	0	„	6	3	..		6	3	
673	Smith, A.	„	10	2	135	0	0	„	6	2	..		6	2	
674	Dingle, E. J.	„	10	2	135	0	0	„	6	2	..		6	2	
675	Kemp, W. J.	„	10	2	135	0	0	„	6	2	..		6	2	
676	Rollo, C.	„	10	2	135	0	0	„	6	2	..		6	2	
677	Coutts, M.	„	10	2	135	0	0	„	6	2	..		6	2	
678	Calton, E. A.	„	10	2	135	0	0	„	6	2	..		6	2	
679	Vosper, E. J. L.	„	10	2	135	0	0	„	6	2	..		6	2	
680	Charlton, A. R.	„	10	2	135	0	0	„	6	2	..		6	2	
681	Hogan, T.	„	10	2	135	0	0	„	6	1	..		6	1	
682	Cottam, C. W.	„	10	2	135	0	0	„	6	1	..		6	1	
683	Campbell, M. D.	„	10	2	135	0	0	„	6	1	..		6	1	
684	McAloon, J. J.	„	10	2	135	0	0	„	6	1	..		6	1	
685	Trowland, R.	„	10	2	135	0	0	„	6	1	..		6	1	
686	Martin, T.	„	10	1	125	0	0	„	6	1	..		6	1	
687	Morey, H. B.	„	10	2	135	0	0	„	6	1	..		6	1	
688	Temm, F. G. J.	„	10	2	135	0	0	„	6	0	..		6	0	
689	Dwyer, J. T.	„	10	2	180	0	0	„	14	4	..		14	4	
690	Atkinson, B. C.	„	10	2	180	0	0	„	13	7	..		13	7	
691	Noble, W.	„	10	2	165	0	0	„	26	4	..		26	4	
692	Street, D. A.	„	10	2	165	0	0	„	14	10	0	4	14	11	
693	Williams, T. H.	„	10	2	150	0	0	„	5	3	..		5	3	
694	Murray, P. J.	„	10	2	165	0	0	„	8	10	..		8	10	
695	Bambery, A. B.	„	10	2	165	0	0	„	8	7	..		8	7	
696	Bailey, L. A.	„	10	2	135	0	0	„	5	10	..		5	10	
697	McDuff, W. P.	„	10	2	135	0	0	„	5	6	..		5	6	
698	Wylie, A.	Timber Checker	10	2	180	0	0	„	26	3	..		26	3	
699	Gibson, T. A.	Clerk	10	2	135	0	0	„	6	4	..		6	4	
700	Lyall, F.	„	10	2	165	0	0	„	11	0	2	11	13	11	
701	Duff, H. P.	„	10	2	135	0	0	„	6	7	..		6	7	
702	Cairns, T.	„	10	2	165	0	0	„	12	6	..		12	6	
703	Perry, G.	„	10	2	180	0	0	„	12	5	..		12	5	
704	Rose, J.	„	10	2	135	0	0	„	4	4	2	8	7	0	
705	Mardon, R. H. C.	„	10	2	135	0	0	„	4	4	2	5	6	9	
706	McPherson, N. L. S.	„	10	2	135	0	0	„	4	4	3	9	8	1	
707	Duffy, A. N.	„	10	1	125	0	0	„	6	0	..		6	0	
708	Longhurst, B. G. W. D.	„	10	1	125	0	0	„	6	0	..		6	0	
709	Goodley, A.	„	10	1	125	0	0	„	6	0	..		6	0	
710	Harwood, T. A.	„	10	1	125	0	0	„	5	11	..		5	11	
711	Browett, C. G.	„	10	1	125	0	0	„	5	5	..		5	5	

RAILWAY DEPARTMENT CLASSIFICATION, 1913—*continued.*

FIRST DIVISION—*continued.*

SUBDIVISION II—*continued.*

Salaried Staff not otherwise specified—continued.

Prog. No.	Name.	Classification.				Service			Remarks.
		Designation.	Grade.	Subgrade.	Salary.	Since last appointed.	Prior to Date last appointed.	For Superannuation Purposes.	
					£ s. d.	Y. M.	Y. M.	Y. M.	
712	Laley, E. C.	Clerk	10	1	125 0 0 per ann.	5 11	..	5 11	
713	Carroll, T. J.	〃	10	1	125 0 0 〃	5 11	..	5 11	
714	Dean, A. J.	〃	10	1	125 0 0 〃	5 11	..	5 11	
715	Egan, J. M.	〃	10	1	125 0 0 〃	5 11	..	5 11	
716	Finlay, A. V.	〃	10	1	125 0 0 〃	5 11	..	5 11	
717	Keane, D. J.	〃	10	1	125 0 0 〃	5 11	..	5 11	
718	Webb, J. S.	〃	10	1	125 0 0 〃	5 11	..	5 11	
719	Cassey, C. B.	〃	10	1	125 0 0 〃	5 11	..	5 11	
720	Martin, J. A.	〃	10	1	125 0 0 〃	5 10	..	5 10	
721	Miller, G. A.	〃	10	1	125 0 0 〃	5 10	..	5 10	
722	Thompson, W. R.	〃	10	1	125 0 0 〃	5 10	..	5 10	
723	Kimber, G.	〃	10	1	125 0 0 〃	5 10	..	5 10	
724	Hickey, J. D.	〃	10	1	125 0 0 〃	5 10	..	5 10	
725	Trewern, H. A.	〃	10	1	125 0 0 〃	5 10	..	5 10	
726	Brydon, R. O.	〃	10	1	125 0 0 〃	5 10	..	5 10	
727	Natta, J. A.	〃	10	1	125 0 0 〃	5 10	..	5 10	
728	Hudson, C.	Draftsman	10	1	135 0 0 〃	5 10	..	5 10	
729	Saunders, W. A.	Clerk	10	1	125 0 0 〃	5 10	..	5 10	
730	Hilgendorf, C. S.	〃	10	1	125 0 0 〃	5 9	..	5 9	
731	Millow, A. E.	〃	10	1	125 0 0 〃	5 9	..	5 9	
732	Stephen, D.	〃	10	1	125 0 0 〃	5 9	..	5 9	
733	Vollemaere, A. J.	〃	10	1	125 0 0 〃	5 9	..	5 9	
734	Clark, W. S.	〃	10	1	125 0 0 〃	5 9	..	5 9	
735	Smith, H. L. P.	Draftsman	10	1	135 0 0 〃	5 9	..	5 9	
736	Barton, J.	Clerk	10	1	125 0 0 〃	5 9	..	5 9	
737	Hunter, W. L.	〃	10	1	125 0 0 〃	5 9	..	5 9	
738	Black, A.	〃	10	1	125 0 0 〃	5 9	..	5 9	
739	Croft, W. A.	〃	10	1	125 0 0 〃	5 9	..	5 9	
740	Thompson, C. L.	〃	10	1	125 0 0 〃	5 9	..	5 9	
741	McClatchy, H. P.	〃	10	1	125 0 0 〃	5 9	..	5 9	
742	Jenkinson, E. E.	Draftsman	10	1	135 0 0 〃	5 9	..	5 9	
743	Hayes, A. P.	Clerk	10	1	125 0 0 〃	5 9	..	5 9	
744	Chambers, E. P.	〃	10	1	125 0 0 〃	5 9	..	5 9	
745	Dent, C.	〃	10	1	125 0 0 〃	5 9	..	5 9	
746	Austin, N. B.	〃	10	1	125 0 0 〃	5 9	..	5 9	
747	Pocknall, W. T.	〃	10	1	125 0 0 〃	5 9	..	5 9	
748	Benfell, E. W.	〃	10	1	125 0 0 〃	5 9	..	5 9	
749	Moorman, W.	〃	10	1	125 0 0 〃	5 8	..	5 8	
750	Bennett, J. H.	〃	10	1	125 0 0 〃	5 8	..	5 8	
751	Ayers, S. W.	〃	10	1	125 0 0 〃	5 8	..	5 8	
752	Richdale, W. E.	〃	10	1	125 0 0 〃	5 8	..	5 8	
753	Butler, G. C. W.	〃	10	1	125 0 0 〃	5 8	..	5 8	
754	McLean, J. M.	〃	10	1	125 0 0 〃	5 8	..	5 8	
755	Matheson, N. M.	〃	10	1	125 0 0 〃	5 8	..	5 8	
756	Mitchell, J. A.	〃	10	1	125 0 0 〃	5 2	..	5 2	
757	Orr, E. D.	〃	10	1	125 0 0 〃	5 8	..	5 8	
758	Bennett, J.	〃	10	1	125 0 0 〃	5 8	..	5 8	
759	Benefield, G T.	〃	10	1	125 0 0 〃	9 4	..	9 4	
760	Shaw, G. E.	〃	10	1	125 0 0 〃	5 8	..	5 8	
761	Weenink, C. B.	〃	10	1	125 0 0 〃	5 8	0 2	5 10	
762	Brockliss, R. T. J.	〃	10	1	125 0 0 〃	5 8	..	5 8	
763	Donne, S. E.	〃	10	1	125 0 0 〃	5 2	..	5 2	
764	Murphy, V.	〃	10	1	125 0 0 〃	5 8	..	5 8	
765	Carmine, L. V.	〃	10	1	125 0 0 〃	5 8	..	5 8	
766	Barrett, W. J.	〃	10	1	125 0 0 〃	5 8	..	5 8	
767	Forsyth, N. L.	〃	10	1	125 0 0 〃	4 7	..	4 7	
768	Borton, J. H.	〃	10	1	125 0 0 〃	5 7	..	5 7	
769	Grigg, M. H.	〃	10	1	125 0 0 〃	5 1	..	5 1	
770	Munn, S. D.	〃	10	1	125 0 0 〃	5 7	..	5 7	
771	Mintrom, F. H.	〃	10	1	125 0 0 〃	5 7	..	5 7	
772	Worsnop, W. A.	〃	10	1	125 0 0 〃	5 7	..	5 7	
773	Sword, D.	〃	10	1	125 0 0 〃	5 7	..	5 7	
774	Stephens, F. J.	〃	10	1	125 0 0 〃	5 7	..	5 7	
775	Blaikie, S. J.	〃	10	1	125 0 0 〃	5 7	..	5 7	
776	Whittleston, C. T.	〃	10	1	125 0 0 〃	5 6	..	5 6	
777	Mitchell, J. J.	〃	10	1	125 0 0 〃	5 6	..	5 6	
778	Arney, H. A.	〃	10	1	125 0 0 〃	5 6	..	5 6	
779	Cochrane, R. S.	〃	10	1	125 0 0 〃	5 6	..	5 6	
780	McDavitt, J. P.	〃	10	1	125 0 0 〃	5 5	..	5 5	
781	Taylor, E. F.	〃	10	1	125 0 0 〃	5 5	..	5 5	
782	Murcott, S. G.	〃	10	1	125 0 0 〃	5 5	..	5 5	
783	Marshall, B. E.	〃	10	1	125 0 0 〃	5 5	..	5 5	
784	Pringle, E.	〃	10	1	125 0 0 〃	5 5	..	5 5	
785	Jamieson, W. H.	〃	10	1	125 0 0 〃	5 5	..	5 5	
786	McRae, T. M. F.	〃	10	1	125 0 0 〃	5 5	..	5 5	
787	Murphy, L.	〃	10	1	125 0 0 〃	5 5	..	5 5	

RAILWAY DEPARTMENT CLASSIFICATION, 1913—*continued.*

FIRST DIVISION—*continued.*

SUBDIVISION II—*continued.*

Salaried Staff not otherwise specified—continued.

Prog. No.	Name.	Classification.				Service			Remarks.
		Designation.	Grade.	Subgrade.	Salary.	Since last appointed.	Prior to Date last appointed.	For Superannuation Purposes.	
					£ s. d.	Y. M.	Y. M.	Y. M.	
788	Nielsen, D. S.	Clerk	10	1	125 0 0 per ann.	5 4	..	5 4	
789	Dick, W. T.	„	10	1	125 0 0 „	5 4	..	5 4	
790	Wilson, F. C.	„	10	1	125 0 0 „	5 4	..	5 4	
791	Avey, G. A.	„	10	1	125 0 0 „	5 4	..	5 4	
792	Grammer, J.	„	10	1	125 0 0 „	5 4	..	5 4	
793	Walker, A. K.	„	10	1	125 0 0 „	5 4	..	5 4	
794	McMaster, P.	„	10	1	125 0 0 „	5 4	..	5 4	
795	McDonald, E. R.	„	10	1	125 0 0 „	5 4	..	5 4	
796	Bright, L.	„	10	1	125 0 0 „	5 4	..	5 4	
797	Gill, G. A.	„	10	1	125 0 0 „	5 4	..	5 4	
798	White, C. W. S.	„	10	1	125 0 0 „	5 4	..	5 4	
799	Felton, B.	„	10	1	125 0 0 „	5 3	..	5 3	
800	Thornton, R. C.	„	10	1	125 0 0 „	5 3	..	5 3	
801	McKay, A. H.	„	10	1	125 0 0 „	5 3	..	5 3	
802	Finlin, E. A.	„	10	1	125 0 0 „	5 3	..	5 3	
803	Colgan, J.	„	10	1	125 0 0 „	5 3	..	5 3	
804	Gilmour, J. H.	„	10	1	125 0 0 „	5 3	..	5 3	
805	Johnston, T.	„	10	1	125 0 0 „	5 3	..	5 3	
806	Wilkie, C. F.	„	10	1	125 0 0 „	5 3	..	5 3	
807	Jull, J. A.	„	10	1	125 0 0 „	5 3	..	5 3	
808	Kerr, L.	„	10	1	125 0 0 „	5 3	..	5 3	
809	Jones, C. B.	„	10	1	125 0 0 „	5 3	..	5 3	
810	Devlin, J. M. A.	„	10	1	125 0 0 „	5 3	..	5 3	
811	Ryan, A.	„	10	1	125 0 0 „	5 3	..	5 3	
812	Sargison, W.	„	10	1	125 0 0 „	5 3	..	5 3	
813	Scott, A.	„	10	1	125 0 0 „	5 3	..	5 3	
814	Munro, D. R. S.	„	10	1	125 0 0 „	5 3	..	5 3	
815	Domigan, W. J.	„	10	1	125 0 0 „	5 3	..	5 3	
816	Mullany, C. L.	„	10	1	125 0 0 „	5 3	..	5 3	
817	Wilson, W. E.	„	10	1	125 0 0 „	5 3	..	5 3	
818	Roberts, W. L.	„	10	1	125 0 0 „	5 3	..	5 3	
819	Fanselow, W. S.	„	10	1	125 0 0 „	5 2	..	5 2	
820	Simons, E. G.	„	10	1	125 0 0 „	5 2	..	5 2	
821	Henderson, W. G.	„	10	1	125 0 0 „	5 2	..	5 2	
822	Svensen, C. W.	„	10	1	125 0 0 „	5 2	..	5 2	
823	Lambeth, T. A.	„	10	1	125 0 0 „	5 2	..	5 2	
824	Carroll, M. E.	„	10	1	125 0 0 „	5 2	..	5 2	
825	Andersen, N.	„	10	1	125 0 0 „	5 2	..	5 2	
826	Wright, W.	„	10	1	125 0 0 „	5 2	..	5 2	
827	Couper, E. G.	„	10	1	125 0 0 „	5 2	..	5 2	
828	Sexton, S. R.	„	10	1	125 0 0 „	5 2	..	5 2	
829	Martin, J.	„	10	1	125 0 0 „	5 2	..	5 2	
830	Parker, W. E.	„	10	1	125 0 0 „	5 2	..	5 2	
831	Bishop, S. E.	„	10	1	125 0 0 „	5 2	..	5 2	
832	Martin, S.	„	10	1	125 0 0 „	5 2	..	5 2	
833	Cronin, C. F.	„	10	1	125 0 0 „	5 2	..	5 2	
834	Grigg, N. C. W.	„	10	1	125 0 0 „	5 2	..	5 2	
835	Peryer, C. N.	„	10	1	125 0 0 „	5 2	..	5 2	
836	Reynolds, C. S.	„	10	1	125 0 0 „	5 2	..	5 2	
837	Crawford, A. N.	„	10	1	125 0 0 „	5 2	..	5 2	
838	Todd, C. M.	„	10	1	125 0 0 „	5 2	..	5 2	
839	Hallett, N.	„	10	1	125 0 0 „	5 2	..	5 2	
840	Baker, W. A.	„	10	1	125 0 0 „	5 2	..	5 2	
841	Goodley, J. K.	„	10	1	125 0 0 „	5 2	..	5 2	
842	McIver, H. P.	„	10	1	125 0 0 „	5 2	..	5 2	
843	Tangney, B.	„	10	1	125 0 0 „	5 2	..	5 2	
844	Withers, C. H.	„	10	1	125 0 0 „	5 2	..	5 2	
845	Wheeler, E. R.	„	10	1	125 0 0 „	5 1	..	5 1	
846	Shand, A. L.	„	10	1	125 0 0 „	5 1	..	5 1	
847	Wilson, A. W.	„	10	1	125 0 0 „	5 1	..	5 1	
848	McKay, R. G.	„	10	1	125 0 0 „	5 1	..	5 1	
849	Martin, F. O.	„	10	1	125 0 0 „	5 1	..	5 1	
850	Coughlan, J.	„	10	1	125 0 0 „	5 1	..	5 1	
851	Diver, F.	„	10	1	125 0 0 „	5 1	..	5 1	
852	Cahill, L.	„	10	1	125 0 0 „	5 1	..	5 1	
853	Climo, R. C.	„	10	1	125 0 0 „	5 1	..	5 1	
854	Dowsett, A. R. D.	„	10	1	125 0 0 „	5 1	..	5 1	
855	Griffin, N. N.	„	10	1	125 0 0 „	5 1	..	5 1	
856	Chambers, P. S. H.	„	10	1	125 0 0 „	4 7	..	4 7	
857	Blackie, J.	„	10	1	125 0 0 „	5 1	..	5 1	
858	Riesop, C. R.	„	10	1	125 0 0 „	5 1	..	5 1	
859	Galvin, J.	„	10	1	125 0 0 „	5 1	..	5 1	
860	Hall, J. L. P.	„	10	1	125 0 0 „	5 1	..	5 1	
861	Johnston, C. G.	Draftsman	10	1	135 0 0 „	5 1	..	5 1	
862	Smith, S. E.	Clerk	10	1	125 0 0 „	5 1	..	5 1	
863	Allison, G.	„	10	1	125 0 0 „	5 1	..	5 1	

RAILWAY DEPARTMENT CLASSIFICATION, 1913—*continued.*

Prog. No.	Name.	Classification.				Service			Remarks.
		Designation.	Grade.	Subgrade.	Salary.	Since last appointed.	Prior to Date last appointed.	For Superannuation Purposes.	
					FIRST DIVISION—*continued.* SUBDIVISION II—*continued.* *Salaried Staff not otherwise specified*—continued.				
					£ s. d.	Y. M.	Y. M.	Y. M.	
864	Taylor, R. A.	Clerk	10	1	125 0 0 per ann.	5 1	..	5 1	
865	Mackay, G. M.	″	10	1	125 0 0 ″	5 0	..	5 0	
866	Cummings, W. P.	″	10	1	125 0 0 ″	5 0	..	5 0	
867	Campbell, J.	″	10	1	125 0 0 ″	5 0	..	5 0	
868	Butler, G. S.	″	10	1	125 0 0 ″	5 0	..	5 0	
869	Allan, L. S.	″	10	1	125 0 0 ″	4 6	..	4 6	
870	Walsh, J.	″	10	1	125 0 0 ″	5 0	..	5 0	
871	Brockliss, F. J.	″	10	1	125 0 0 ″	5 0	..	5 0	
872	Mitchell, V.	″	10	1	125 0 0 ″	5 0	..	5 0	
873	Jelfs, L. W. D.	″	10	1	150 0 0 ″	1 day	9 9	0 8	
1	Lowry, A. T. B.	Cadet	11	5	110 0 0 ″	5 8	..	5 8	
2	Milligan, P. E. O.	″	11	5	110 0 0 ″	5 3	..	5 3	
3	McPherson, A. J.	″	11	5	110 0 0 ″	4 4	2 8	7 0	
4	Carson, W. J.	″	11	5	110 0 0 ″	5 0	..	5 0	
5	Kennedy, R.	″	11	5	110 0 0 ″	5 0	..	5 0	
6	McGrath, T. C.	″	11	5	110 0 0 ″	5 0	..	5 0	
7	Finlayson, A.	″	11	5	110 0 0 ″	5 0	..	5 0	
8	Allan, A. R. L.	″	11	5	110 0 0 ″	5 0	..	5 0	
9	Holmes, N.	″	11	5	110 0 0 ″	5 0	..	5 0	
10	Fuldseth, P. N.	″	11	5	110 0 0 ″	5 0	..	5 0	
11	Downes, R. J. L.	″	11	5	110 0 0 ″	5 0	..	5 0	
12	Whittington, C. C.	″	11	5	110 0 0 ″	5 0	..	5 0	
13	Adamson, F. P.	″	11	5	110 0 0 ″	4 6	..	4 6	
14	Broughton, D. S.	″	11	5	110 0 0 ″	5 0	..	5 0	
15	McLean, W. R.	″	11	5	110 0 0 ″	5 0	..	5 0	
16	Tunbridge, P. A.	″	11	5	110 0 0 ″	5 0	..	5 0	
17	Walmsley, W. H.	″	11	5	110 0 0 ″	5 0	..	5 0	
18	Mackay, J. R.	″	11	5	110 0 0 ″	4 11	..	4 11	
19	Steers, H. A.	″	11	5	110 0 0 ″	4 11	..	4 11	
20	Clark, G. K.	″	11	5	110 0 0 ″	4 11	..	4 11	
21	Old, E.	″	11	5	110 0 0 ″	4 11	..	4 11	
22	Moon, W. G.	″	11	5	110 0 0 ″	4 11	..	4 11	
23	Garvey, P.	″	11	5	110 0 0 ″	4 11	..	4 11	
24	Smith, W. H.	″	11	5	110 0 0 ″	4 11	..	4 11	
25	Sherratt, A. S.	″	11	5	110 0 0 ″	4 11	..	4 11	
26	Mathieson, A. N.	″	11	5	110 0 0 ″	4 11	..	4 11	
27	McQueen, J. A.	″	11	5	110 0 0 ″	4 11	..	4 11	
28	Carter, R.	″	11	5	110 0 0 ″	4 11	..	4 11	
29	Lauder, W. C.	″	11	5	110 0 0 ″	4 11	..	4 11	
30	Clunan, P. J.	″	11	5	110 0 0 ″	4 11	..	4 11	
31	Rohloff, A. F. R.	″	11	5	110 0 0 ″	4 11	..	4 11	
32	Chappell, M. L.	″	11	5	110 0 0 ″	4 10	..	4 10	
33	Hyland, H.	″	11	5	110 0 0 ″	4 10	..	4 10	
34	Birchfield, C. D.	″	11	5	110 0 0 ″	4 10	..	4 10	
35	Banks, C.	″	11	5	110 0 0 ″	4 4	..	4 4	
36	Neilson, E. F.	″	11	5	110 0 0 ″	4 10	..	4 10	
37	O'Maley, W.	″	11	5	110 0 0 ″	4 10	..	4 10	
38	McAra, R. A.	″	11	5	110 0 0 ″	4 10	..	4 10	
39	Ross, V. F.	″	11	5	110 0 0 ″	5 6	..	5 6	
40	McEnirney, P. J.	″	11	5	110 0 0 ″	4 10	..	4 10	
41	Robb, E. J.	″	11	5	110 0 0 ″	4 10	..	4 10	
42	Willsteed, W. B.	″	11	5	110 0 0 ″	4 10	..	4 10	
43	Orr, J. S. H.	″	11	5	110 0 0 ″	4 10	..	4 10	
44	Clingberg, W. C.	″	11	5	110 0 0 ″	4 10	..	4 10	
45	Seccombe, A. P.	″	11	5	110 0 0 ″	4 10	..	4 10	
46	Fowler, A. D.	″	11	5	110 0 0 ″	4 9	..	4 9	
47	Turkington, G.	″	11	5	110 0 0 ″	4 9	..	6 8	
48	Earnshaw, S.	″	11	5	110 0 0 ″	4 9	..	4 9	
49	Knutson, F. B.	″	11	5	110 0 0 ″	4 9	..	4 9	
50	Cockburn, E.	″	11	5	110 0 0 ″	4 9	..	4 9	
51	Furey, D. J.	″	11	5	110 0 0 ″	4 9	..	4 9	
52	Cooke, L. A.	″	11	5	110 0 0 ″	5 4	..	5 4	
53	Nash, F.	″	11	5	110 0 0 ″	4 9	..	4 9	
54	Maclaine, A. J.	″	11	5	110 0 0 ″	4 9	..	4 9	
55	Vaughan, R. P.	″	11	5	110 0 0 ″	4 9	..	4 9	
56	Blackwell, W. G.	″	11	5	110 0 0 ″	4 9	..	4 9	
57	Dowdle, T. S.	″	11	5	110 0 0 ″	4 8	..	4 8	
58	Hickey, M.	″	11	5	110 0 0 ″	4 8	..	4 8	
59	Travers, C. E.	″	11	5	110 0 0 ″	4 8	..	4 8	
60	Hammond, J. C.	″	11	5	110 0 0 ″	4 8	..	4 8	
61	Worsdell, A. G.	″	11	5	110 0 0 ″	4 8	..	4 8	
62	Power, W. J.	″	11	5	110 0 0 ″	4 8	..	4 8	
63	Hanan, J. A. N.	″	11	5	110 0 0 ″	5 11	..	5 11	
64	Murray, A. R.	″	11	5	110 0 0 ″	4 8	..	4 8	

RAILWAY DEPARTMENT CLASSIFICATION, 1913—*continued.*

FIRST DIVISION—*continued.*

SUBDIVISION II—*continued.*

Salaried Staff not otherwise specified—continued.

Prog. No.	Name.	Classification.				Service			Remarks.
		Designation.	Grade.	Subgrade.	Salary.	Since last appointed.	Prior to Date last appointed.	For Superannuation Purposes.	
					£ s. d.	Y. M.	Y. M.	Y. M.	
65	Osborne, L. K.	Cadet	11	5	110 0 0 per ann.	4 8	..	4 8	
66	Pepperell, R. A.	„	11	5	110 0 0 „	4 8	..	4 8	
67	Howell, S. C.	„	11	5	110 0 0 „	4 7	..	4 7	
68	Cotter, C.	„	11	5	110 0 0 „	4 7	..	4 7	
69	McKone, M.	„	11	5	110 0 0 „	4 7	..	4 7	
70	Leahy, P.	„	11	5	110 0 0 „	5 4	..	5 4	
71	Chapman, L. L. E.	„	11	5	110 0 0 „	4 7	..	4 7	
72	Leonard, T. F.	„	11	5	110 0 0 „	4 7	..	4 7	
73	Perry, S.	„	11	5	110 0 0 „	4 7	..	4 7	
74	Boyland, E. R.	„	11	5	110 0 0 „	4 7	..	4 7	
75	Hayman, L.	„	11	5	110 0 0 „	4 7	..	4 7	
76	Smith, A. W. H.	„	11	5	110 0 0 „	4 7	..	4 7	
77	Power, J. M.	„	11	5	110 0 0 „	4 7	..	4 7	
78	Beaton, T.	„	11	5	110 0 0 „	4 7	..	4 7	
79	McGahan, C. W.	„	11	5	110 0 0 „	4 7	..	4 7	
80	Deavoll, W. I.	„	11	5	110 0 0 „	4 6	..	4 6	
81	Swinney, R.	„	11	5	110 0 0 „	4 6	..	4 6	
82	Lambie, A. L.	„	11	5	110 0 0 „	5 2	..	5 2	
83	Roberts, L. R.	„	11	5	110 0 0 „	4 6	..	4 6	
84	Sirett, G. L.	„	11	5	110 0 0 „	4 6	..	4 6	
85	Dick, H. J.	„	11	5	110 0 0 „	4 6	..	4 6	
86	McCallum, D.	„	11	5	110 0 0 „	4 6	..	4 6	
87	Bowden, W. E.	„	11	5	110 0 0 „	4 6	..	4 6	
88	Luhrs, J. A.	„	11	5	110 0 0 „	4 5	..	4 5	
89	Hyde, L. G.	„	11	5	110 0 0 „	4 5	..	4 5	
90	Fearon, A. E.	„	11	5	110 0 0 „	4 5	..	4 5	
91	Setter, W. R.	„	11	5	110 0 0 „	4 5	..	4 5	
92	Brookie, V. A.	„	11	5	110 0 0 „	4 5	..	4 5	
93	Martin, A. V.	„	11	5	110 0 0 „	4 5	..	4 5	
94	Millard, R. M.	„	11	5	110 0 0 „	4 5	..	4 5	
95	Pye, W. W.	„	11	5	110 0 0 „	4 4	..	4 4	
96	Naish, W. H.	„	11	5	110 0 0 „	4 4	..	4 4	
97	Battersby, R. W.	„	11	5	110 0 0 „	4 4	..	4 4	
98	Ferriday, J. M.	„	11	5	110 0 0 „	4 4	..	4 4	
99	Symonds, C. J.	„	11	5	110 0 0 „	4 4	2 5	6 9	
100	Hodges, D.	„	11	5	110 0 0 „	4 4	1 2	5 6	
101	Fitzgerald, J. J.	„	11	5	110 0 0 „	4 4	2 1	6 5	
102	Greig, A. M.	„	11	5	110 0 0 „	4 4	1 0	5 4	
103	Parr, E. A.	„	11	5	110 0 0 „	4 4	0 11	5 3	
104	Pattle, T. T. P.	„	11	5	110 0 0 „	4 4	1 8	6 0	
105	Daniel, J.	„	11	5	110 0 0 „	4 3	..	4 3	
106	Jobberns, J.	„	11	5	110 0 0 „	4 3	..	4 3	
107	Halley, W.	„	11	5	110 0 0 „	4 3	..	4 3	
108	King, L. W.	„	11	5	110 0 0 „	4 3	..	4 3	
109	Dwan, A. P.	„	11	5	110 0 0 „	4 3	..	4 3	
110	Sutherland, T.	„	11	5	110 0 0 „	4 3	..	4 3	
111	Hardie, W. A.	„	11	5	110 0 0 „	4 3	..	4 3	
112	Lewton, E. J. G.	„	11	5	110 0 0 „	4 2	..	4 2	
113	Hedge, C. G.	„	11	5	110 0 0 „	4 2	..	4 2	
114	Tayler, W. C.	„	11	5	110 0 0 „	4 2	..	4 2	
115	Lyons, M.	„	11	5	110 0 0 „	4 2	..	4 2	
116	Adams, H.	„	11	5	110 0 0 „	4 2	..	4 2	
117	Simpson, J.	„	11	5	110 0 0 „	4 2	..	4 2	
118	Hare, J.	„	11	5	110 0 0 „	4 2	..	4 2	
119	Hoskins, W. W.	„	11	5	110 0 0 „	4 2	..	4 2	
120	Saunders, F. G.	„	11	5	110 0 0 „	4 2	..	4 2	
121	Pilkington, C. V.	„	11	5	110 0 0 „	4 0	..	4 0	
122	Bird, A. V. A.	„	11	5	110 0 0 „	4 4	1 8	6 0	
123	Quinn, E. J. F.	„	11	4	95 0 0 „	4 6	..	4 6	
124	Ford, A. J.	„	11	4	95 0 0 „	3 11	..	3 11	
125	Lefevre, J. M.	„	11	4	95 0 0 „	3 10	..	3 10	
126	Bevan, F. K.	„	11	4	95 0 0 „	3 10	..	3 10	
127	McIlroy, H.	„	11	4	95 0 0 „	3 10	..	3 10	
128	Dawson, F. S. B.	„	11	4	95 0 0 „	3 10	..	3 10	
129	O'Connor, C.	„	11	4	95 0 0 „	4 3	..	4 3	
130	Edie, H. K.	Civil Engineering Cadet	11	4	105 0 0 „	3 9	..	4 1	
131	Findlay, W.	Cadet	11	4	95 0 0 „	3 9	..	3 9	
132	Bulman, J.	„	11	4	95 0 0 „	3 9	..	3 9	
133	Gow, R. R.	Civil Engineering Cadet	11	4	105 0 0 „	3 9	..	3 9	
134	Manning, P. S.	Cadet	11	4	95 0 0 „	3 9	..	3 9	
135	McCrae, A. R.	„	11	4	95 0 0 „	3 8	..	3 8	
136	Barnes, E. W.	„	11	4	95 0 0 „	3 8	..	3 8	
137	Sinclair, D. O.	„	11	4	95 0 0 „	3 8	..	3 8	
138	McCullough, J.	„	11	4	95 0 0 „	3 8	..	3 8	
139	Haxton, G. W.	„	11	4	95 0 0 „	3 8	..	3 8	

RAILWAY DEPARTMENT CLASSIFICATION, 1913—*continued.*

FIRST DIVISION—*continued.*

SUBDIVISION II—*continued.*

Salaried Staff not otherwise specified—continued.

Prog. No	Name.	Classification.				Service			Remarks.
		Designation.	Grade.	Subgrade.	Salary.	Since last appointed.	Prior to Date last appointed.	For Superannuation Purposes.	
					£ s. d.	Y. M.	Y. M.	Y. M.	
140	Cameron, J. R.	Cadet	11	4	95 0 0 per ann.	3 8	..	3 8	
141	Bayldon, T.	〃	11	4	95 0 0 〃	3 7	..	3 7	
142	Lee, H.	〃	11	4	95 0 0 〃	3 7	..	3 7	
143	Devine, T. E.	〃	11	4	95 0 0 〃	4 2	..	4 2	
144	Heginbotham, G. R.	〃	11	4	95 0 0 〃	3 7	..	3 7	
145	Rae, T. H.	〃	11	4	95 0 0 〃	3 6	..	4 3	
146	McArthur, A. A.	Mechanical Engineering Cadet	11	4	105 0 0 〃	3 4	..	3 4	
147	Abrahall, C. D.	Cadet	11	4	95 0 0 〃	3 3	..	3 3	
148	Bassett, A. N.	〃	11	4	95 0 0 〃	3 1	..	3 1	
149	Meek, H. D.	〃	11	4	95 0 0 〃	3 1	..	3 1	
150	Macaskill, M.	〃	11	3	80 0 0 〃	3 0	..	3 0	
151	Auld, W. R.	〃	11	3	80 0 0 〃	3 0	..	3 0	
152	Guthrie, T. J.	〃	11	3	80 0 0 〃	3 0	..	3 0	
153	Williamson, H. M.	〃	11	3	80 0 0 〃	3 0	..	3 0	
154	Scott, R. B.	〃	11	3	80 0 0 〃	3 0	..	3 0	
155	Dawson, R. S.	〃	11	3	80 0 0 〃	2 11	..	2 11	
156	Duncan, W. M.	〃	11	3	80 0 0 〃	2 11	..	2 11	
157	Angus, P. R.	Mechanical Engineering Cadet	11	3	90 0 0 〃	2 10	..	2 10	
158	O'Donnell, P. J.	Cadet	11	3	80 0 0 〃	2 10	..	2 10	
159	Fort, L. E.	〃	11	3	80 0 0 〃	2 10	..	2 10	
160	Henderson, H. H.	〃	11	3	80 0 0 〃	2 10	..	2 10	
161	Higginson, N. L.	〃	11	3	80 0 0 〃	2 9	..	2 9	
162	Stevenson, W. B.	〃	11	3	80 0 0 〃	2 9	..	2 9	
163	Boswell, R.	〃	11	3	80 0 0 〃	2 9	..	2 9	
164	Greenwood, E. P.	〃	11	3	80 0 0 〃	2 9	..	2 9	
165	Keys, F. P.	〃	11	3	80 0 0 〃	2 8	..	2 8	
166	Lorimer, H. S.	〃	11	3	80 0 0 〃	2 9	..	2 9	
167	Scoullar, W. A.	〃	11	3	80 0 0 〃	2 2	..	2 2	
168	McAuley, F. H.	〃	11	3	80 0 0 〃	2 8	..	2 8	
169	Jackson, J. T.	〃	11	3	80 0 0 〃	2 8	..	2 8	
170	Ross, D. M.	〃	11	3	80 0 0 〃	2 8	..	2 8	
171	Sage, A. H.	〃	11	3	80 0 0 〃	2 7	..	2 7	
172	Bell, J. S.	〃	11	3	80 0 0 〃	2 7	..	2 7	
173	Kennedy, P.	〃	11	3	80 0 0 〃	2 7	..	2 7	
174	Clark, H. G.	〃	11	2	65 0 0 〃	1 7	..	1 7	
175	Whiting, N. A.	〃	11	3	80 0 0 〃	2 7	..	2 7	
176	McFaul, D.	〃	11	3	80 0 0 〃	2 7	..	2 7	
177	Revell, H. J.	〃	11	3	80 0 0 〃	2 6	..	2 6	
178	Graham, L.	〃	11	3	80 0 0 〃	2 5	..	2 5	
179	Wilson, J. O.	〃	11	3	80 0 0 〃	2 5	..	2 5	
180	White, W. A.	〃	11	3	80 0 0 〃	2 4	..	2 4	
181	Mooney, E. M. A.	〃	11	3	80 0 0 〃	2 4	..	2 4	
182	Simpson, J. A.	〃	11	3	80 0 0 〃	2 3	..	2 3	
183	De Clifford, L. J.	〃	11	3	80 0 0 〃	2 3	..	2 3	
184	O'Toole, J.	〃	11	3	80 0 0 〃	2 3	..	2 3	
185	Snelling, F. J.	〃	11	3	80 0 0 〃	2 3	..	2 3	
186	Wills, C. N.	〃	11	3	80 0 0 〃	2 3	..	2 3	
187	May, F.	〃	11	3	80 0 0 〃	2 3	..	2 3	
188	Beck, W. C.	〃	11	3	80 0 0 〃	2 3	..	2 3	
189	Pringle, S. J.	〃	11	3	80 0 0 〃	2 3	..	2 3	
190	Cains, J. M.	〃	11	3	80 0 0 〃	2 2	..	5 7	
191	Clarke, E.	〃	11	3	80 0 0 〃	2 2	..	2 2	
192	Guy, I. D.	〃	11	3	80 0 0 〃	2 2	..	2 2	
193	Scoullar, W. A.	〃	11	3	80 0 0 〃	2 2	..	2 2	
194	Hopkirk, R. E. B.	〃	11	3	80 0 0 〃	2 2	..	2 2	
195	Hay, J. D.	〃	11	3	80 0 0 〃	2 2	..	2 2	
196	Brogan, W. A.	〃	11	3	80 0 0 〃	2 1	..	2 1	
197	Haddock, O. H.	〃	11	3	80 0 0 〃	2 1	..	2 1	
198	Andrews, H. L.	〃	11	3	80 0 0 〃	2 1	..	2 1	
199	Brown, R. T.	〃	11	3	80 0 0 〃	2 1	..	2 1	
200	Ciochetto, C. V.	〃	11	3	80 0 0 〃	2 0	..	2 0	
201	Quested, J. R.	〃	11	3	80 0 0 〃	2 0	..	2 0	
202	Rowe, C. L.	〃	11	3	80 0 0 〃	2 0	..	2 0	
203	McDonald, E. J.	〃	11	3	80 0 0 〃	2 0	..	2 0	
204	Styles, W. W.	〃	11	2	65 0 0 〃	1 11	..	1 11	
205	McNeill, N. J.	〃	11	2	65 0 0 〃	1 11	..	1 11	
206	Pickering, L.	〃	11	2	65 0 0 〃	1 11	..	1 11	
207	Laloli, J. H.	〃	11	2	65 0 0 〃	1 11	..	1 11	
208	Ballantyne, A. S.	〃	11	2	65 0 0 〃	1 11	..	1 11	
209	Bond, V. R.	〃	11	2	65 0 0 〃	1 11	..	1 11	
210	Ashley, C. J.	〃	11	2	65 0 0 〃	1 11	..	1 11	
211	Robertson, L. W.	Mechanical Engineering Cadet	11	2	75 0 0 〃	1 11	..	1 11	

Railway Department Classification, 1913—*continued.*

Prog. No.	Name.	Classification.				Service			Remarks.
		Designation.	Grade.	Subgrade.	Salary.	Since last appointed.	Prior to Date last appointed.	For Superannuation Purposes.	
					FIRST DIVISION—*continued.* Subdivision II—*continued.* *Salaried Staff not otherwise specified*—continued.				
					£ s. d.	Y. M.	Y. M.	Y. M.	
212	Pugh, F. G.	Cadet	11	2	65 0 0 per ann.	1 11	..	1 11	
213	Lee, E. W.	Civil Engineering Cadet	11	2	75 0 0 „	1 10	..	1 10	
214	O'Brien, T. A.	Cadet	11	2	65 0 0 „	1 10	..	1 10	
215	McGrath, G.	„	11	2	65 0 0 „	1 10	..	1 10	
216	Hart, L. M.	„	11	2	65 0 0 „	1 10	..	1 10	
217	Young, J. R.	Mechanical Engineering Cadet	11	2	75 0 0 „	1 10	..	1 10	
218	McCarthy, J. H. J.	Cadet	11	2	65 0 0 „	1 9	..	1 9	
219	Henson, J. H. H.	„	11	2	65 0 0 „	1 9	..	1 9	
220	Cochran, J. I. Y.	„	11	2	65 0 0 „	1 9	..	1 9	
221	Sheard, E. E.	„	11	2	65 0 0 „	1 9	..	1 9	
222	Binsted, J.	Mechanical Engineering Cadet	11	2	75 0 0 „	1 9	..	1 9	
223	Christopher, J. G.	Cadet	11	2	65 0 0 „	1 9	..	1 9	
224	Johnston, J. E.	„	11	2	65 0 0 „	1 9	..	1 9	
225	Linehan, C. A.	„	11	2	65 0 0 „	1 9	..	1 9	
226	Timings, M. T.	„	11	2	65 0 0 „	1 9	..	1 9	
227	Soulsby, J.	„	11	2	65 0 0 „	1 9	..	1 9	
228	Howie, S. G.	„	11	2	65 0 0 „	1 9	..	1 9	
229	Ramsay, R. G.	„	11	2	65 0 0 „	1 8	..	1 8	
230	Hannah, J.	„	11	2	65 0 0 „	1 8	..	1 8	
231	Bradshaw, G. B.	Mechanical Engineering Cadet	11	2	75 0 0 „	1 8	..	1 8	
232	Collier, H.	Cadet	11	2	65 0 0 „	1 8	..	1 8	
233	Bowles, W. B.	„	11	2	65 0 0 „	1 8	..	1 8	
234	Hogan, T.	„	11	2	65 0 0 „	1 8	..	1 8	
235	Kelleher, H. W.	„	11	2	65 0 0 „	1 8	..	1 8	
236	Willcox, G. H. C.	„	11	2	65 0 0 „	1 8	..	1 8	
237	Aickin, F. W.	„	11	2	65 0 0 „	1 8	..	1 8	
238	Aickin, R. P.	„	11	2	65 0 0 „	1 8	..	1 8	
239	Mellor, L. W.	„	11	2	65 0 0 „	1 8	..	1 8	
240	Young, J. F. H.	„	11	2	65 0 0 „	1 8	..	1 8	
241	Dromgool, A. A. W.	Civil Engineering Cadet	11	2	75 0 0 „	1 8	..	1 8	
242	Cahill, S.	Cadet	11	2	65 0 0 „	1 8	..	1 8	
243	Bolton, L. M.	„	11	2	65 0 0 „	1 8	..	1 8	
244	Ridgley, J. A. A.	„	11	2	65 0 0 „	1 7	..	2 10	
245	Woodhead, C. D.	„	11	2	65 0 0 „	1 7	..	1 7	
246	Luhrs, E. O. M.	„	11	2	65 0 0 „	1 7	..	1 7	
247	Jaspers, L.	„	11	2	65 0 0 „	1 6	..	1 6	
248	Murcott, A. M.	„	11	2	65 0 0 „	1 6	..	1 6	
249	Mullany, E. J.	„	11	2	65 0 0 „	1 6	..	1 6	
250	Ramsay, M. H.	„	11	2	65 0 0 „	1 6	..	1 6	
251	Harpur, W. P.	„	11	2	65 0 0 „	1 5	..	1 5	
252	Hill, G. H.	„	11	2	65 0 0 „	1 5	..	1 5	
253	Sykes, L. J.	„	11	2	65 0 0 „	1 5	..	1 5	
254	Fitzgerald, T. D.	„	11	2	65 0 0 „	1 5	..	1 5	
255	Lee, L. A.	„	11	2	65 0 0 „	1 4	..	1 4	
256	McManus, B.	„	11	2	65 0 0 „	1 4	..	1 4	
257	Thwaites, T.	„	11	2	65 0 0 „	1 4	..	1 4	
258	Forster, T. H.	„	11	2	65 0 0 „	1 4	..	1 4	
259	Davies, F.	„	11	2	65 0 0 „	1 4	..	1 4	
260	McIntosh, W. L.	„	11	2	65 0 0 „	1 4	..	1 4	
261	McLean, C. N.	„	11	2	65 0 0 „	1 3	..	1 3	
262	O'Neill, F. L.	„	11	2	65 0 0 „	1 3	..	1 3	
263	Thomson, W. T. H.	„	11	2	65 0 0 „	1 3	..	1 3	
264	Paton, H. H.	„	11	2	65 0 0 „	1 3	..	1 3	
265	McKain, E. T.	„	11	2	65 0 0 „	1 3	..	1 3	
266	Ryan, T. J.	„	11	2	65 0 0 „	1 2	..	1 2	
267	Moynihan, D.	„	11	2	65 0 0 „	1 2	..	1 2	
268	Blomfield, L. D.	„	11	2	65 0 0 „	1 2	..	1 2	
269	Braithwaite, H. W.	„	11	2	65 0 0 „	1 2	..	1 2	
270	Lusty, H. C.	Civil Engineering Cadet	11	2	75 0 0 „	1 2	..	1 2	
271	Methven, R.	Cadet	11	2	65 0 0 „	1 2	..	1 2	
272	Barkle, I. N.	„	11	2	65 0 0 „	1 2	..	1 2	
273	Creed, H. A. W.	„	11	2	65 0 0 „	1 2	..	1 2	
274	Goodland, J. F.	„	11	1	50 0 0 „	1 2	..	1 2	
275	Leopard, H.	„	11	2	65 0 0 „	1 2	..	1 2	
276	Cameron, C. W. M.	„	11	1	50 0 0 „	1 1	..	1 1	
277	Weeber, R. J. S.	„	11	1	50 0 0 „	1 1	..	1 1	
278	Taylor, P. A.	„	11	2	65 0 0 „	1 1	..	1 1	
279	Arbuckle, E. A. B.	„	11	2	65 0 0 „	1 1	..	1 1	
280	Hammond, H.	„	11	2	65 0 0 „	1 1	..	1 1	
281	Ede, A. J.	„	11	2	65 0 0 „	1 1	..	1 1	
282	O'Connor, T. J.	„	11	2	65 0 0 „	1 1	..	1 1	
283	McKenzie, J.	„	11	2	65 0 0 „	1 0	..	1 0	

RAILWAY DEPARTMENT CLASSIFICATION, 1913—*continued.*

FIRST DIVISION—*continued.*

SUBDIVISION II—*continued.*

Salaried Staff not otherwise specified—continued.

Prog. No.	Name.	Classification.				Service			Remarks.
		Designation.	Grade.	Subgrade.	Salary.	Since last appointed.	Prior to Date last appointed.	For Superannuation Purposes.	
					£ s. d.	Y. M.	Y. M.	Y. M.	
284	Brown, K. W.	Cadet	11	2	65 0 0 per ann.	1 0	..	1 0	
285	Phillips, C. T.	„	11	2	65 0 0 „	1 0	..	1 0	
286	Cullen, T.	„	11	2	65 0 0 „	1 0	..	1 0	
287	Breach, W. A.	„	11	2	65 0 0 „	1 0	..	1 0	
288	Searle, W. T.	„	11	2	65 0 0 „	1 0	..	1 0	
289	Preston, W. H.	„	11	1	50 0 0 „	1 0	..	1 0	
290	Elsom, W.	„	11	1	50 0 0 „	1 0	..	1 0	
291	Watkins, R.	„	11	1	50 0 0 „	1 0	..	1 0	
292	Fahey, P. M.	„	11	1	50 0 0 „	1 0	..	1 0	
293	Stanley, B. T.	„	11	1	50 0 0 „	1 0	..	1 0	
294	Scott, H. R.	„	11	1	50 0 0 „	1 0	..	1 0	
295	Le Brun, A. W.	„	11	1	50 0 0 „	1 0	..	1 0	
296	Hickey, L. V.	„	11	1	50 0 0 „	1 0	..	1 0	
297	O'Brien, S.	„	11	1	50 0 0 „	1 0	..	1 0	
298	Green, J. G.	„	11	1	50 0 0 „	1 0	..	1 0	
299	Butterworth, A. R.	„	11	1	50 0 0 „	1 0	..	1 0	
300	McGill, P. J.	„	11	1	50 0 0 „	1 0	..	1 0	
301	Pepper, S.	„	11	1	50 0 0 „	1 0	..	1 0	
302	Walker, F. C.	„	11	1	50 0 0 „	1 0	..	1 0	
303	Wilson, A.	„	11	1	50 0 0 „	0 11	..	0 11	
304	Urwin, J. H.	„	11	1	50 0 0 „	0 11	..	0 11	
305	Dooley, J.	„	11	1	50 0 0 „	0 11	..	0 11	
306	Mitchell, D. C.	„	11	1	50 0 0 „	0 11	..	0 11	
307	Kaye, C. A.	„	11	1	50 0 0 „	0 11	..	0 11	
308	Flynn, A. M.	„	11	1	50 0 0 „	0 11	..	0 11	
309	Creed, H. A.	„	11	1	50 0 0 „	0 11	..	0 11	
310	Southgate, F. W.	„	11	1	50 0 0 „	0 11	..	0 11	
311	Malcolm, R. C. E.	„	11	1	50 0 0 „	0 11	..	0 11	
312	Couch, V. W.	„	11	1	50 0 0 „	0 11	..	0 11	
313	Porter, A.	„	11	1	50 0 0 „	0 11	..	0 11	
314	Bowman, W.	„	11	1	50 0 0 „	0 11	..	0 11	
315	Greer, H. A.	„	11	1	50 0 0 „	0 11	..	0 11	
316	Haley, J. L.	„	11	1	50 0 0 „	0 11	..	0 11	
317	Fahey, S.	„	11	1	50 0 0 „	0 11	..	0 11	
318	Crawford, H.	„	11	1	50 0 0 „	0 11	..	0 11	
319	Fowke, A. G.	„	11	1	50 0 0 „	0 11	..	0 11	
320	Maddock, H.	„	11	1	50 0 0 „	0 11	..	0 11	
321	Lavin, H. F. G. H.	„	11	1	50 0 0 „	0 11	..	0 11	
322	Landells, P. H. T.	„	11	1	50 0 0 „	0 11	..	0 11	
323	Winskill, G.	„	11	1	50 0 0 „	0 11	..	0 11	
324	Coutts, W.	„	11	1	50 0 0 „	0 11	..	0 11	
325	Bishop, J. B.	„	11	1	50 0 0 „	0 10	..	0 10	
326	Grant, F. J.	„	11	1	50 0 0 „	0 10	..	0 10	
327	Dallard, S. D.	„	11	1	50 0 0 „	0 10	..	0 10	
328	Smale, R. R.	„	11	1	50 0 0 „	0 10	..	0 10	
329	Batchelor, H. J.	„	11	1	50 0 0 „	0 10	..	0 10	
330	Cotter, F. T. P.	„	11	1	50 0 0 „	0 10	..	0 10	
331	Herman, A.	„	11	1	50 0 0 „	0 10	..	0 10	
332	Jacobs, H. D.	„	11	1	50 0 0 „	0 10	..	0 10	
333	Redpath, C. A.	„	11	1	50 0 0 „	0 10	..	0 10	
334	Robb, R. D.	„	11	1	50 0 0 „	0 10	..	0 10	
335	Leigh, T. J.	„	11	1	50 0 0 „	0 10	..	0 10	
336	Herd, J. A.	„	11	1	50 0 0 „	0 10	..	0 10	
337	Roberts, J. S.	„	11	1	50 0 0 „	0 10	..	0 10	
338	Daly, J. P.	„	11	1	50 0 0 „	0 10	..	0 10	
339	O'Brien, N. W.	„	11	1	50 0 0 „	0 10	..	0 10	
340	Black, M.	„	11	1	50 0 0 „	0 10	..	0 10	
341	Morrison, W. H.	„	11	1	50 0 0 „	0 10	..	0 10	
342	Welsh, F. W. J.	„	11	1	50 0 0 „	0 10	..	0 10	
343	Williams, E. R.	„	11	1	50 0 0 „	0 10	..	0 10	
344	Hill, C. G.	„	11	1	50 0 0 „	0 9	..	0 9	
345	Kidson, O. L.	„	11	1	50 0 0 „	0 9	..	0 9	
346	Casey, T. J.	„	11	1	50 0 0 „	0 9	..	0 9	
347	Townsend, F. P.	„	11	1	50 0 0 „	0 9	..	0 9	
348	Hemming, L. R.	„	11	1	50 0 0 „	0 9	..	0 9	
349	Watkins, B. R.	„	11	1	50 0 0 „	0 9	..	0 9	
350	Casey, E. B.	„	11	1	50 0 0 „	0 9	..	0 9	
351	Morton, J. H.	„	11	1	50 0 0 „	0 9	..	0 9	
352	Williams, J. H.	„	11	1	50 0 0 „	0 9	..	0 9	
353	Collins, J. J.	„	11	1	50 0 0 „	0 9	..	0 9	
354	Lawton, M. R.	„	11	1	50 0 0 „	0 9	..	0 9	
355	Parker, A. G.	„	11	1	50 0 0 „	0 9	..	0 9	
356	Ross, A. G.	„	11	1	50 0 0 „	0 9	..	0 9	
357	Main, W. J.	„	11	1	50 0 0 „	0 9	..	0 9	

RAILWAY DEPARTMENT CLASSIFICATION, 1913—*continued*.

FIRST DIVISION—*continued*.

SUBDIVISION II—*continued*.

Salaried Staff not otherwise specified—continued.

Prog. No.	Name.	Classification.				Service			Remarks.
		Designation.	Grade.	Subgrade.	Salary.	Since last appointed.	Prior to Date last appointed.	For Superannuation Purposes.	
					£ s. d.	Y. M.	Y. M.	Y. M.	
358	Teward, T.	Cadet	11	1	50 0 0 per ann.	0 9	..	0 9	
359	Middleton, W.	〃	11	1	50 0 0 〃	0 9	..	0 9	
360	Hurley, J.	〃	11	1	50 0 0 〃	0 9	..	0 9	
361	Meyrick, H. H. L.	〃	11	1	50 0 0 〃	0 9	..	0 9	
362	Corkill, T.	〃	11	1	50 0 0 〃	0 9	..	0 9	
363	King, J. S.	〃	11	1	50 0 0 〃	0 9	..	0 9	
364	Tandy, J. G.	〃	11	1	50 0 0 〃	0 9	..	0 9	
365	Clarke, D. A.	〃	11	1	50 0 0 〃	0 8	..	0 8	
366	Tritt, W. C.	〃	11	1	50 0 0 〃	0 8	..	0 8	
367	Wilson, C. G.	Civil Engineering Cadet	11	1	60 0 0 〃	0 8	..	0 8	
368	Duncan, W.	Cadet	11	1	50 0 0 〃	0 8	..	0 8	
369	McLelland, R.	〃	11	1	50 0 0 〃	0 8	..	0 8	
370	Boswell, A. C.	〃	11	1	50 0 0 〃	0 8	..	0 8	
371	Anderson, A. D.	〃	11	1	50 0 0 〃	0 8	..	0 8	
372	Beswick, W. S.	〃	11	1	50 0 0 〃	0 8	..	0 8	
373	Peebles, H. A.	〃	11	1	50 0 0 〃	0 8	..	0 8	
374	Williams, F. W.	〃	11	1	50 0 0 〃	0 8	..	0 8	
375	Hilliard, G. V.	〃	11	1	50 0 0 〃	0 8	..	0 8	
376	Sheldon, G. M.	〃	11	1	50 0 0 〃	0 8	..	0 8	
377	Beetham, A. M.	〃	11	1	50 0 0 〃	0 8	..	0 8	
378	Mullins, J. P.	〃	11	1	50 0 0 〃	0 8	..	0 8	
379	Tierney, G. T.	〃	11	1	50 0 0 〃	0 8	..	0 8	
380	Hartland, J. W.	〃	11	1	50 0 0 〃	0 8	..	0 8	
381	Katene, F.	〃	11	1	50 0 0 〃	0 8	..	0 8	
382	Tullett, A. J.	〃	11	1	50 0 0 〃	0 8	..	0 8	
383	Pointon, R. J.	〃	11	1	50 0 0 〃	0 8	..	0 8	
384	Fisher, C. E.	〃	11	1	50 0 0 〃	0 8	..	0 8	
385	Wanikau, N. K.	〃	11	1	50 0 0 〃	0 8	..	0 8	
386	Kay, J. P.	〃	11	1	50 0 0 〃	0 7	..	0 7	
387	List, A. E.	〃	11	1	50 0 0 〃	0 7	..	0 7	
388	Martin, E. W.	〃	11	1	50 0 0 〃	0 7	..	0 7	
389	Dickson, L.	〃	11	1	50 0 0 〃	0 7	..	0 7	
390	McAlister, A. S.	〃	11	1	50 0 0 〃	0 7	..	0 7	
391	O'Connor, P. J.	〃	11	1	50 0 0 〃	0 7	..	0 7	
392	Thrupp, G. E.	〃	11	1	50 0 0 〃	0 7	..	0 7	
393	Brice, C. C.	〃	11	1	50 0 0 〃	0 7	..	0 7	
394	Palmer, L.	〃	11	1	50 0 0 〃	0 7	..	0 7	
395	Pope, W. B.	〃	11	1	50 0 0 〃	0 7	..	0 7	
396	Budge, J. A.	〃	11	1	50 0 0 〃	0 7	..	0 7	
397	Thomas, C. R.	〃	11	1	50 0 0 〃	0 7	..	0 7	
398	McKinstry, L. G.	〃	11	1	50 0 0 〃	0 7	..	0 7	
399	Watt, J.	〃	11	1	50 0 0 〃	0 7	..	0 7	
400	Reid, J.	〃	11	1	50 0 0 〃	0 7	..	0 7	
401	Rolland, A. F.	〃	11	1	50 0 0 〃	0 7	..	0 7	
402	Street, K. A.	〃	11	1	50 0 0 〃	0 7	..	0 7	
403	Fox, J. M.	〃	11	1	50 0 0 〃	0 7	..	0 7	
404	Wallace, A. O.	〃	11	1	50 0 0 〃	0 7	..	0 7	
405	White, R. L.	〃	11	1	50 0 0 〃	0 7	..	0 7	
406	Farquharson, W.	〃	11	1	50 0 0 〃	0 7	..	0 7	
407	Winter, A. E.	〃	11	1	50 0 0 〃	0 7	..	0 7	
408	Sullivan, F. J.	〃	11	1	50 0 0 〃	0 7	..	0 7	
409	Murphy, J. P.	〃	11	1	50 0 0 〃	0 6	..	0 6	
410	Williamson, L. J.	〃	11	1	50 0 0 〃	0 6	..	0 6	
411	Wallace, C. D.	〃	11	1	50 0 0 〃	0 6	..	0 6	
412	Ritchie, A. H.	〃	11	1	50 0 0 〃	0 6	..	0 6	
413	Farrell, E.	〃	11	1	50 0 0 〃	0 6	..	0 6	
414	Tukukino, K.	〃	11	1	50 0 0 〃	0 6	..	0 6	
415	Warren, T. G.	〃	11	1	50 0 0 〃	0 6	..	0 6	
416	Byers, W. E.	〃	11	1	50 0 0 〃	0 6	..	0 6	
417	Bishop, S. A.	〃	11	1	50 0 0 〃	0 6	..	0 6	
418	Alington, E. H.	〃	11	1	50 0 0 〃	0 6	..	0 6	
419	Berrill, L. M.	〃	11	1	50 0 0 〃	0 6	..	0 6	
420	Richardson, L. E.	〃	11	1	50 0 0 〃	0 6	..	0 6	
421	Cliffe, W. L.	〃	11	1	50 0 0 〃	0 6	..	0 6	
422	Webber, J. H.	〃	11	1	50 0 0 〃	0 6	..	0 6	
423	Franklin, G. D.	〃	11	1	50 0 0 〃	0 6	..	0 6	
424	Devereux, W. J.	〃	11	1	50 0 0 〃	0 5	..	0 5	
425	Watson, C. R.	〃	11	1	50 0 0 〃	0 5	..	0 5	
426	Kennedy, J. G.	〃	11	1	50 0 0 〃	0 5	..	0 5	
427	Kelleher, J.	〃	11	1	50 0 0 〃	0 5	..	0 5	
428	Tuckey, G. J.	〃	11	1	50 0 0 〃	0 5	..	0 5	
429	McAlister, H. J.	〃	11	1	50 0 0 〃	0 5	..	0 5	
430	Menzies, S.	〃	11	1	50 0 0 〃	0 5	..	0 5	
431	Ballantyne, W. W.	〃	11	1	50 0 0 〃	0 5	..	0 5	
432	Lyons, E. T.	〃	11	1	50 0 0 〃	0 5	..	0 5	

RAILWAY DEPARTMENT CLASSIFICATION, 1913—*continued.*

FIRST DIVISION—*continued.*

SUBDIVISION II—*continued.*

Salaried Staff not otherwise specified—continued.

Prog. No.	Name.	Classification.				Service			Remarks.
		Designation.	Grade.	Subgrade.	Salary.	Since last appointed.	Prior to Date last appointed.	For Superannuation Purposes.	
					£ s. d.	Y. M.	Y. M.	Y. M.	
433	Hodgman, G. F.	Cadet	11	1	50 0 0 per ann.	0 5	..	0 5	
434	Craighead, L.	„	11	1	50 0 0 „	0 4	..	0 4	
435	O'Callaghan, T. F.	„	11	1	50 0 0 „	0 4	..	0 4	
436	Gunderson, T. O.	„	11	1	50 0 0 „	0 4	..	0 4	
437	Hirst, D. C. E.	„	11	1	50 0 0 „	0 4	..	0 4	
438	Gilmour, A. F.	„	11	1	50 0 0 „	0 4	..	0 4	
439	Fulton, E. W.	„	11	1	50 0 0 „	0 4	..	0 4	
440	Gordon, W. D.	„	11	1	50 0 0 „	0 4	..	0 4	
441	Auld, H.	„	11	1	50 0 0 „	0 4	..	0 4	
442	Rose, D.	„	11	1	50 0 0 „	0 4	..	0 4	
443	Hanna, T. R.	„	11	1	50 0 0 „	0 4	..	0 4	
444	Kenny, D. J.	„	11	1	50 0 0 „	0 4	..	0 4	
445	Mitchell, A. M.	„	11	1	50 0 0 „	0 4	..	0 4	
446	Kelly, F. G.	„	11	1	50 0 0 „	0 4	..	0 4	
447	Black, T. S.	„	11	1	50 0 0 „	0 4	..	0 4	
448	Blomfield, R. N.	„	11	1	50 0 0 „	0 4	..	0 4	
449	O'Carroll, T. M.	„	11	1	50 0 0 „	0 4	..	0 4	
450	Boesley, G. H. J.	„	11	1	50 0 0 „	0 4	..	0 4	
451	Crowther, V. C.	„	11	1	50 0 0 „	0 4	..	0 4	
452	Keane, L. G. D.	„	11	1	50 0 0 „	0 4	..	0 4	
453	Robertson, J. K.	„	11	1	50 0 0 „	0 4	..	0 4	
454	Young, R. R.	„	11	1	50 0 0 „	0 4	..	0 4	
455	Barham, W. J.	„	11	1	50 0 0 „	0 4	..	0 4	
456	O'Sullivan, L. M.	„	11	1	50 0 0 „	0 4	..	0 4	
457	Ridding, C. R.	„	11	1	50 0 0 „	0 4	..	0 4	
458	Pengelly, W. H.	„	11	1	50 0 0 „	0 3	..	0 3	
459	Mitchell, W. R. J.	„	11	1	50 0 0 „	0 3	..	0 3	
460	O'Shea, J. R.	„	11	1	50 0 0 „	0 3	..	0 3	
461	Wilkinson, N.	„	11	1	50 0 0 „	0 3	..	0 3	
462	Levick, A. E.	„	11	1	50 0 0 „	0 3	..	0 3	
463	Searle, F. W.	„	11	1	50 0 0 „	0 3	..	0 3	
464	Smith, S. F.	„	11	1	50 0 0 „	0 3	..	0 3	
465	Fanzelow, G. H.	„	11	1	50 0 0 „	0 3	..	0 3	
466	Fogelberg, C. E.	„	11	1	50 0 0 „	0 3	..	0 3	
467	Grenfell, G. C.	„	11	1	50 0 0 „	0 3	..	0 3	
468	Marshall, J. H.	„	11	1	50 0 0 „	0 3	..	0 3	
469	Masson, F. W.	„	11	1	50 0 0 „	0 3	..	0 3	
470	Furk, R. H.	„	11	1	50 0 0 „	0 3	..	0 3	
471	McGill, J.	„	11	1	50 0 0 „	0 3	..	0 3	
472	Mincher, C. O. D.	„	11	1	50 0 0 „	0 3	..	0 3	
473	Freeman, C. C.	„	11	1	50 0 0 „	0 2	..	0 2	
474	Avey, L. T.	„	11	1	50 0 0 „	0 2	..	0 2	
475	Owens, C. A.	„	11	1	50 0 0 „	0 2	..	0 2	
476	Carberry, G. I.	„	11	1	50 0 0 „	0 2	..	0 2	
477	Murch, H. C.	„	11	1	50 0 0 „	0 2	..	0 2	
478	Campbell, T. G.	„	11	1	50 0 0 „	0 2	..	0 2	
479	Rowland, C. K.	„	11	1	50 0 0 „	0 2	..	0 2	
480	Pollard, T. M.	„	11	1	50 0 0 „	0 2	..	0 2	
481	Crowther, W. J.	„	11	1	50 0 0 „	0 2	..	0 2	
482	Ackroyd, A.	„	11	1	50 0 0 „	0 2	..	0 2	
483	McArley, J. L.	„	11	1	50 0 0 „	0 2	..	0 2	
484	Martin, R. R.	„	11	1	50 0 0 „	0 2	..	0 2	
485	Hansen, H. R.	„	11	1	50 0 0 „	0 2	..	0 2	
486	Gunn, W. G.	„	11	1	50 0 0 „	0 2	..	0 2	
487	Ward, A. S.	„	11	1	50 0 0 „	0 2	..	0 2	
488	Jones, K.	„	11	1	50 0 0 „	0 2	..	0 2	
489	Green, H. C.	„	11	1	50 0 0 „	0 2	..	0 2	
490	Clark, R. J.	„	11	1	50 0 0 „	0 2	..	0 2	
491	Ward, J. H.	„	11	1	50 0 0 „	0 2	..	0 2	
492	Howell, I. J.	Civil Engineering Cadet	11	1	60 0 0 „	0 2	..	0 2	
493	Brown, W. T.	Cadet	11	1	50 0 0 „	0 2	..	0 2	
494	Leggett, N. P.	„	11	1	50 0 0 „	0 2	..	0 2	
495	Jerman, C. E. E.	„	11	1	50 0 0 „	0 2	..	0 2	
496	McCarthy, H. J.	„	11	1	50 0 0 „	0 2	..	0 2	
497	Sinclair, E. E.	„	11	1	50 0 0 „	0 2	..	0 2	
498	Day, W. H.	„	11	1	50 0 0 „	0 1	..	0 1	
499	Cooney, J. W.	„	11	1	50 0 0 „	0 1	..	0 1	
500	Wemyss, R. W.	„	11	1	50 0 0 „	0 1	..	0 1	
501	Callaway, H. C.	„	11	1	50 0 0 „	0 1	..	0 1	
502	Norton, E. A. B.	„	11	1	50 0 0 „	0 1	..	0 1	
503	Horton, L. J. W.	„	11	1	50 0 0 „	0 1	..	0 1	
504	Carleton, C. T.	„	11	1	50 0 0 „	0 1	..	0 1	
505	Annear, J. A.	„	11	1	50 0 0 „	0 1	..	0 1	
506	Sutherland, M.	„	11	1	50 0 0 „	0 1	..	0 1	

RAILWAY DEPARTMENT CLASSIFICATION, 1913—*continued.*

FIRST DIVISION—*continued.*

SUBDIVISION II—*continued.*

Salaried Staff not otherwise specified—continued.

Prog. No.	Name.	Classification. Designation.	Grade.	Subgrade.	Salary.	Service Since last appointed.	Prior to Date last appointed.	For Superannuation Purposes.	Remarks.
					£ s. d.	Y. M.	Y. M.	Y. M.	
507	Watson, G. G.	Cadet	11	1	50 0 0 per ann.	0 1	..	0 1	
508	Noon, P. T.	„	11	1	50 0 0 „	0 1	..	0 1	
509	Slatter, J. A.	„	11	1	50 0 0 „	0 1	..	0 1	
510	Ciochetto, D. H.	„	11	1	50 0 0 „	0 1	..	0 1	
511	Grant, D. H.	„	11	1	50 0 0 „	0 1	..	0 1	
512	Doidge, O. J.	Civil Engineering Cadet	11	1	60 0 0 „	0 1	..	0 1	
513	McLaren, S. G.	Cadet	11	1	50 0 0 „	0 1	..	0 1	
514	Christian, E. G.	„	11	1	50 0 0 „	0 1	..	0 1	
515	Connolly, A. E.	„	11	1	50 0 0 „	0 1	..	0 1	
516	Hay, D.	„	11	1	50 0 0 „	0 1	..	0 1	
517	Stevens, H. W. M.	„	11	1	50 0 0 „	0 1	..	0 1	
518	Moore, G. R.	„	11	1	50 0 0 „	0 1	..	0 1	
519	Doyle, J. F.	„	11	1	50 0 0 „	0 1	..	0 1	
520	Blackburn, R. E.	„	11	1	50 0 0 „	0 1	..	0 1	
521	Jones, W. J.	„	11	1	50 0 0 „	0 1	..	0 1	
522	Roberts, D. W.	„	11	1	50 0 0 „	0 1	..	0 1	
523	Poole, G. T.	„	11	1	50 0 0 „	0 1	..	0 1	
524	Grant, H. W.	„	11	1	50 0 0 „	0 1	..	0 1	
525	Fitzgerald, P. C.	„	11	1	50 0 0 „	0 1	..	0 1	
526	Parrant, A. W. H.	„	11	1	50 0 0 „	0 1	..	0 1	
527	Ryan, L. T. J.	„	11	1	50 0 0 „	8 days	..	8 days	
528	Burgess, E. E.	„	11	1	50 0 0 „	8 days	..	8 days	
529	Bright, A. T.	„	11	1	50 0 0 „	8 days	..	8 days	
530	Davie, H. J.	„	11	1	50 0 0 „	8 days	..	8 days	
531	Carroll, R. C.	„	11	1	50 0 0 „	7 days	..	7 days	
532	Carroll, P. N.	„	11	1	50 0 0 „	6 days	..	6 days	
533	Te Waru, M.	„	11	1	50 0 0 „	6 days	..	6 days	
534	Shepherd, L. G.	„	11	1	50 0 0 „	6 days	..	6 days	
535	Meyer, A. M.	„	11	1	50 0 0 „	4 days	..	4 days	
536	McKenzie, L. D.	„	11	1	50 0 0 „	4 days	..	4 days	
537	Fisher, W. G.	„	11	1	50 0 0 „	2 days	..	2 days	
538	Gorman, L. J.	„	11	1	50 0 0 „	2 days	..	2 days	
539	Logan, H. C.	„	11	1	50 0 0 „	1 day	..	1 day	

Lake Wakatipu Steamer Service.

Prog. No.	Name.	Designation.	Grade.	Subgrade.	Salary.	Since last appointed.	Prior to Date last appointed.	For Superannuation Purposes.	Remarks.
1	Robertson, J. B.	Captain	1	..	18 0 0 per month	5 0	5 5	10 5	
1	Kennedy, J.	„	2	..	15 10 0 „	5 0	5 5	10 5	
1	Duston, H.	Engineer	1	..	18 0 0 „	5 0	5 5	10 5	
1	Robertson, J. W.	„	2	..	15 10 0 „	5 0	5 5	10 5	
2	McDowall, F.	„	2	..	15 10 0 „	5 0	5 5	10 5	
1	Farrant, J. G.	Mate	2	..	9 0 0 „	5 0	5 5	10 5	
2	Luckie, T. R.	„	2	..	9 0 0 „	1 10	4 5	1 10	

RAILWAY DEPARTMENT CLASSIFICATION, 1913—*continued.*

SECOND DIVISION.

Class 1: Traffic and Stores.

Prog. No.	Name.	Classification.				Service			Remarks
		Designation.	Subclass.	Grade.	Rate of Pay.	Since last appointed.	Prior to Date last appointed.	For Superannuation Purposes.	
					£ s. d.	Y. M.	Y. M.	Y. M.	
1	Hayward, A.	Guard	..	1	0 11 6 per diem	33 8	..	33 8	
2	James, H. W.	"	..	1	0 11 6 "	34 8	..	34 8	
3	Newton, J.	"	..	1	0 11 6 "	21 11	10 0	30 5	
4	Martin, J.	"	..	1	0 11 6 "	30 9	..	30 9	
5	Bowie, D.	"	..	1	0 11 6 "	28 4	..	28 4	
6	Melrose, D.	"	..	1	0 11 6 "	30 8	..	30 8	
7	Everett, W. G.	"	..	1	0 11 6 "	28 4	1 0	29 4	
8	Dempsey, J.	"	..	1	0 11 6 "	27 11	2 0	29 11	
9	Whitham, J.	"	..	1	0 11 6 "	26 3	..	26 3	From date of taking up Guard's duties.
10	Neale, W. H.	Shunter	..	1	0 11 0 "	31 1	..	31 1	
11	Jack, J. R.	Storeman	..	1	0 11 0 "	34 10	..	34 10	
12	Tullock, H.	Signalman	..	1	0 11 0 "	34 5	..	34 5	
13	Randle, R.	Storeman (Stores)	..	1	0 11 0 "	33 4	..	33 4	
14	Mikkelson, W.	"	..	1	0 11 0 "	30 3	..	30 3	
15	Ryan, J.	" (Stores)	..	1	0 11 0 "	34 3	..	34 3	
16	Low, C.	Guard	..	1	0 11 6 "	34 0	..	34 0	
17	Auger, F.	"	..	1	0 11 6 "	23 10	..	23 10	
18	Barrett, J. G.	"	..	1	0 11 6 "	29 2	..	29 2	
19	McDonald, J.	Storeman	..	1	0 11 0 "	22 7	..	22 7	
20	Grant, J. R.	"	..	1	0 11 0 "	31 0	..	31 0	
21	Gordon, A.	Guard	..	1	0 11 6 "	19 9	11 10	31 7	
22	Caldwell, J. H.	"	..	1	0 11 6 "	18 0	3 0	18 0	
23	Martelli, H.	"	..	1	0 11 6 "	26 10	..	26 10	
24	Carroll, J. E.	"	..	1	0 11 6 "	29 0	..	29 0	
25	Parkin, H.	"	..	1	0 11 6 "	22 7	..	22 7	
26	Shiels, J. A.	"	..	1	0 11 6 "	22 7	..	22 7	
27	Auger, A.	"	..	1	0 11 6 "	24 5	..	24 5	
28	Barlow, A. E.	"	..	1	0 11 6 "	23 11	..	23 11	
29	Davis, J. H.	"	..	1	0 11 6 "	23 1	..	23 1	
30	Paterson, H. L.	"	..	1	0 11 6 "	22 7	..	22 7	Ditto.
31	Kempthorne, C. P.	"	..	1	0 11 6 "	29 5	..	29 5	Ditto.
32	Wear, J. H.	Signalman	..	1	0 11 0 "	31 0	..	31 0	
33	Hollow, J. J.	Guard	..	1	0 11 6 "	26 5	..	26 5	
34	Robertson, J.	"	..	1	0 11 6 "	24 1	4 1	24 1	
35	Stemp, G.	"	..	1	0 11 6 "	25 11	..	25 11	
36	Venn, W.	"	..	1	0 11 6 "	27 0	0 11	27 11	
37	Jordan, G. J.	Shunter	..	1	0 11 0 "	22 7	..	22 7	
38	Nash, P.	Guard	..	1	0 11 6 "	24 6	0 5	24 11	
39	Tresidder, W. J.	"	..	1	0 11 6 "	23 0	..	23 0	
40	Townsend, J. A.	"	..	1	0 11 6 "	22 10	..	22 10	
41	McDonald, J.	"	..	1	0 11 6 "	24 2	..	24 2	
42	Grant, E. F. S.	"	..	1	0 11 6 "	24 6	..	24 6	Ditto.
43	Lee, J. H.	"	..	1	0 11 6 "	23 0	..	23 0	
44	Shinkwin, M.	"	..	1	0 11 6 "	25 9	..	25 9	
45	Nickle, W.	"	..	1	0 11 6 "	24 9	..	24 9	Ditto.
46	Nelson, R. J. G.	"	..	1	0 11 6 "	23 6	..	23 6	
47	Parry, J.	"	..	1	0 11 6 "	22 11	..	22 11	
48	Carroll, H. A.	"	..	1	0 11 6 "	29 0	..	29 0	
49	Richards, J. C.	"	..	1	0 11 6 "	22 2	0 10	23 0	
50	Hart, A. H.	"	..	1	0 11 6 "	22 5	0 10	23 3	
51	George, E.	"	..	1	0 11 6 "	23 9	..	23 9	
52	Robertson, H. M.	Signalman	..	1	0 11 0 "	22 7	..	22 7	
53	Jones, W. H.	Storeman (Stores)	..	1	0 11 0 "	29 2	..	29 2	
54	Taylor, R.	Guard	..	1	0 11 6 "	24 4	..	24 4	
55	McEwen, J.	"	..	1	0 11 6 "	23 5	..	23 5	Ditto.
56	Walker, J. A. B.	"	..	1	0 11 6 "	23 8	..	23 8	Ditto.
57	Stanley, G.	"	..	1	0 11 6 "	22 2	1 1	22 2	
58	Friend, A. E.	"	..	1	0 11 6 "	23 7	0 1	23 8	
59	Aitken, J. W.	"	..	1	0 11 6 "	22 5	0 1	22 6	
60	Kelly, W. A.	"	..	1	0 11 6 "	22 10	..	22 10	
61	Green, C.	"	..	1	0 11 6 "	22 10	..	22 10	
62	Reddington, M.	"	..	1	0 11 6 "	30 6	..	30 6	
63	Halligan, W.	Signalman	..	1	0 11 0 "	25 7	0 6	26 1	
64	Wilson, E.	Guard	..	1	0 11 6 "	34 3	..	34 3	Ditto.
65	Halliday, G.	"	..	1	0 11 6 "	21 1	..	21 1	Ditto.
66	Boyd, C. A.	"	..	1	0 11 6 "	22 5	..	22 5	
67	Ray, G. A.	"	..	1	0 11 6 "	26 2	..	26 2	Ditto.
68	Lane, G. C.	"	..	1	0 11 6 "	23 5	..	23 5	
69	Robertson, W. H.	Storeman	..	1	0 11 0 "	22 10	..	22 10	
70	Cameron, W.	Guard	..	1	0 11 6 "	22 7	..	22 7	
71	Watt, J. S.	"	..	1	0 11 6 "	22 7	..	22 7	
72	Hunt, F. N.	"	..	1	0 11 6 "	21 6	..	21 6	
73	Clarkson, A.	"	..	1	0 11 6 "	22 10	..	22 10	
74	Stewart, M. C.	"	..	1	0 11 6 "	22 6	..	22 6	
75	Mullaney, W. T.	"	..	1	0 11 6 "	23 4	..	23 4	
76	Milne, J. W.	"	..	1	0 11 6 "	22 8	..	22 8	

RAILWAY DEPARTMENT CLASSIFICATION, 1913—*continued.*

SECOND DIVISION—*continued.*

Class 1: Traffic and Stores—continued.

Prog. No.	Name.	Classification				Service			Remarks.
		Designation.	Subclass.	Grade.	Rate of Pay.	Since last appointed.	Prior to Date last appointed.	For Superannuation Purposes.	
					£ s. d.	Y. M.	Y. M.	Y. M.	
77	Bates, A.	Storeman	..	1	0 11 0 per diem	22 7	..	22 7	
78	Chisholm, W.	"	..	1	0 11 0 "	22 7	..	22 7	
79	Perkins, B.	"	..	1	0 11 0 "	22 1	..	22 1	
80	Arkley, T.	"	..	1	0 11 0 "	22 1	..	22 1	
81	Shrimpton, R. A.	"	..	1	0 11 0 "	21 1	..	21 1	
82	Stemp, H. H.	"	..	1	0 11 0 "	25 4	2 3	27 7	
83	Scott, P. L.	Guard	..	1	0 11 6 "	22 7	..	22 7	
84	Walker, W. H.	"	..	1	0 11 6 "	23 3	..	23 3	From date of taking up Guard's duties.
85	Railton, J. W.	"	..	1	0 11 6 "	21 0	..	21 0	
86	Lindsay, C. R.	Storeman	..	1	0 11 0 "	21 1	..	21 1	
87	McNamara, J. J.	Guard	..	1	0 11 6 "	17 1	4 0	17 1	
88	Barnes, T. H.	"	..	1	0 11 6 "	21 1	..	21 1	
89	Mason, G. W.	"	..	1	0 11 6 "	20 11	..	20 11	Ditto.
90	Spencer, A.	"	..	1	0 11 6 "	20 11	..	20 11	
91	Cavanagh, M.	"	..	1	0 11 6 "	22 1	..	22 1	
92	Elliott, T. H.	"	..	1	0 11 6 "	19 4	0 1	19 5	
93	Burrell, D.	"	..	1	0 11 6 "	21 10	..	21 10	
94	McBurney, A. W.	"	..	1	0 11 6 "	22 10	0 2	23 0	
95	Crosby, A.	"	..	1	0 11 6 "	23 0	..	23 0	
96	Hodgson, J.	"	..	1	0 11 6 "	22 10	..	22 10	
97	Mackie, T.	"	..	1	0 11 6 "	24 11	..	24 11	Ditto.
98	Keys, G. W.	"	..	1	0 11 6 "	22 1	..	22 1	
99	Dwyer, D.	"	..	1	0 11 6 "	21 9	..	21 9	
100	Hughson, J. P.	"	..	1	0 11 6 "	23 1	..	23 1	
101	McNamara, P. J.	"	..	1	0 11 6 "	22 3	..	22 3	
102	Adkins, E.	"	..	1	0 11 6 "	21 6	..	21 6	
103	Harris, L. A.	"	..	1	0 11 6 "	22 7	..	22 7	
104	O'Connor, F. W.	"	..	1	0 11 6 "	20 10	..	20 10	
105	France, A.	"	..	1	0 11 6 "	20 3	..	20 3	
106	Brooks, T. E.	"	..	1	0 11 6 "	16 11	0 3	17 2	
107	Neil, G. J.	Shunter	..	1	0 11 0 "	21 4	..	21 4	
108	Thompson, C.	Guard	..	1	0 11 6 "	17 11	..	17 11	
109	White, J. A.	"	..	1	0 11 6 "	21 2	..	21 2	
110	Chambers, J. H.	"	..	1	0 11 6 "	17 8	..	17 8	
111	Seaman, A. B.	"	..	1	0 11 6 "	21 0	..	21 0	
112	Panckhurst, J.	"	..	1	0 11 6 "	15 9	3 7	19 4	Ditto.
113	Cameron, H. S.	"	..	1	0 11 6 "	19 11	..	19 11	
114	Ball, H. J.	"	..	1	0 11 6 "	16 10	0 3	16 10	
115	Woodbury, W.	"	..	1	0 11 6 "	19 10	..	19 10	
116	Brown, R.	"	..	1	0 11 6 "	30 5	..	30 5	
117	Kinross, A.	"	..	1	0 11 6 "	32 0	..	32 0	
118	Cox, G. S.	Storeman	..	1	0 11 0 "	34 3	..	34 3	
119	Vass, J.	"	..	1	0 11 0 "	22 6	..	22 6	
120	Paulsen, O.	"	..	1	0 11 0 "	22 1	..	22 1	
121	Burge, J. R.	Guard	..	1	0 11 6 "	36 1	..	36 1	
122	Twose, S. C.	"	..	1	0 11 6 "	17 9	..	17 9	
123	Barlow, W. C.	"	..	1	0 11 6 "	19 11	..	19 11	
124	Tull, B.	"	..	1	0 11 6 "	22 9	..	22 9	
125	Paton, J.	"	..	1	0 11 6 "	22 6	..	22 6	
126	Elliott, E. B.	"	..	1	0 11 6 "	23 10	..	23 10	
127	Auld, J.	"	..	1	0 11 6 "	23 7	..	23 7	Ditto.
128	Lee, M.	"	..	1	0 11 6 "	22 8	..	22 8	
129	McTigue, T.	"	..	1	0 11 6 "	23 5	..	23 5	
130	Wood, S.	"	..	1	0 11 6 "	18 0	2 1	20 1	
131	Guider, J.	Storeman	..	1	0 11 0 "	17 10	..	17 10	
132	Gavey, J.	Guard	..	1	0 11 6 "	17 7	2 1	19 8	
133	Mills, H.	Signalman	..	1	0 11 0 "	20 10	..	20 10	
134	Curran, J.	Guard	..	1	0 11 6 "	22 11	..	22 11	
135	Keen, J. D.	"	..	1	0 11 6 "	22 11	..	22 11	
136	Towers, J. L.	"	..	1	0 11 6 "	16 11	1 1	18 0	
137	Gillespie, W.	"	..	1	0 11 6 "	14 3	0 9	15 0	
138	Burt, A. S.	"	..	1	0 11 6 "	21 0	..	21 0	
139	Mewburn, P.	"	..	1	0 11 6 "	21 8	..	21 8	
140	Fraser, D.	"	..	1	0 11 6 "	21 0	..	21 0	
141	Palmer, G.	"	..	1	0 11 6 "	18 9	..	18 9	Ditto.
142	Burrows, J. J.	"	..	1	0 11 6 "	18 3	..	18 3	Ditto.
143	McDougall, G. T.	Shunter	..	1	0 11 0 "	18 2	..	18 2	
144	Lash, H. J.	Guard	..	1	0 11 6 "	20 1	..	20 1	
145	Duncan, W. B.	"	..	1	0 11 6 "	17 0	2 6	17 0	
146	Wilson, G.	"	..	1	0 11 6 "	21 10	..	21 10	
147	Brookman, I. G. W.	"	..	1	0 11 6 "	17 0	..	17 0	
148	Carr, P. C.	Signalman	..	1	0 11 0 "	21 10	..	21 10	
149	Samuels, C. E. G.	Guard	..	1	0 11 6 "	18 3	..	18 3	
150	Ogilvy, J. A.	"	..	1	0 11 6 "	19 8	..	19 8	
151	Mitchell, F. D.	"	..	1	0 11 6 "	22 3	..	22 3	
152	Cudby, H. H.	"	..	1	0 11 6 "	21 6	..	21 6	

RAILWAY DEPARTMENT CLASSIFICATION, 1913—*continued.*

SECOND DIVISION—*continued.*

Class 1: Traffic and Stores—continued.

Prog. No.	Name.	Classification.				Service			Remarks.
		Designation.	Subclass.	Grade.	Rate of Pay.	Since last appointed.	Prior to Date last appointed.	For Superannuation Purposes.	
					£ s. d.	Y. M.	Y. M.	Y. M.	
153	Finlayson, R.	Guard	..	1	0 11 6 per diem	20 10	..	20 10	
154	Hackett, J. J. C.	″	..	1	0 11 6 ″	19 0	..	19 0	
155	Brown, James	″	..	1	0 11 6 ″	18 8	..	18 8	
156	Winter, J. C.	″	..	1	0 11 6 ″	20 11	..	20 11	
157	Ryan, J.	″	..	1	0 11 6 ″	16 9	..	16 9	
158	Cunningham, J.	″	..	1	0 11 6 ″	23 6	..	23 6	
159	Waller, A. C.	″	..	1	0 11 6 ″	22 7	..	22 7	From date of taking up Guard's duties.
160	Matheson, J.	Signalman	..	1	0 11 0 ″	31 0	..	31 0	
161	Hotchin, F.	Storeman	..	1	0 11 0 ″	22 9	..	22 9	
162	Reddington, P.	Guard	..	1	0 11 6 ″	15 7	0 3	15 10	
163	Marshall, C.	″	..	1	0 11 6 ″	19 5	..	19 5	
164	McCarthy, J. J.	″	..	1	0 11 6 ″	23 1	..	23 1	
165	Welsh, J.	″	..	1	0 11 6 ″	20 2	..	20 2	Ditto.
166	Bade, W. H.	″	..	1	0 11 6 ″	15 8	1 0	16 8	
167	King, D. B.	″	..	1	0 11 6 ″	25 7	..	25 7	
168	Wilson, J.	″	..	1	0 11 6 ″	16 2	1 1	16 2	
169	Duffin, J. H.	″	..	1	0 11 6 ″	20 6	..	20 6	Ditto.
170	Whitcombe, W.	″	..	1	0 11 6 ″	19 4	..	19 4	
171	Haughey, T. E.	Signalman	..	1	0 11 0 ″	19 11	..	19 11	
172	Jenkins, T. A.	Guard	..	1	0 11 6 ″	21 1	..	21 1	Ditto.
173	Rennie, W.	″	..	1	0 11 6 ″	15 9	..	15 9	Ditto.
174	Brennan, T. M.	″	..	1	0 11 6 ″	19 10	..	19 10	
175	Hogan, T.	″	..	1	0 11 6 ″	20 9	..	20 9	
176	Foster, G. C.	″	..	1	0 11 6 ″	15 1	..	15 1	
177	Hill, J.	″	..	1	0 11 6 ″	20 4	..	20 4	
178	Bishop, F. T.	″	..	1	0 11 6 ″	18 3	..	18 3	
179	Walsh, W. F. J.	″	..	1	0 11 6 ″	20 7	0 8	20 7	
180	Pearce, J. F.	″	..	1	0 11 6 ″	20 11	..	20 11	
181	Thomson, J.	″	..	1	0 11 6 ″	18 11	..	18 11	
182	Ryan, P. R.	″	..	1	0 11 6 ″	19 4	..	19 4	Ditto.
183	Westney, W. J.	″	..	1	0 11 6 ″	19 1	..	19 1	
184	Watkins, S. H.	″	..	1	0 11 6 ″	17 8	..	17 8	Ditto.
185	Parker, N.	″	..	1	0 11 6 ″	22 7	..	22 7	Ditto.
186	Sturmer, E. S. T.	″	..	1	0 11 6 ″	22 5	..	22 5	Ditto.
187	Brown, John	Storeman (Newmarket Stores)	..	1	0 11 0 ″	20 9	..	20 9	
188	Hailwood, W.	Storeman	..	1	0 11 0 ″	27 2	..	27 2	
189	McKenzie, W. R.	Guard	..	1	0 11 6 ″	21 11	..	21 11	Ditto.
190	Nolan, C.	Signalman	..	1	0 11 0 ″	18 11	0 6	18 11	
191	Lynch, D.	″	..	1	0 11 0 ″	21 3	..	21 3	
192	Morton, A.	″	..	1	0 11 0 ″	30 5	..	30 5	
193	Gaines, P.	Guard	..	1	0 11 0 ″	15 10	1 0	16 1	
194	Berry, H.	″	..	1	0 11 6 ″	20 10	..	20 10	Ditto.
195	Le Petit, E. A.	Signalman	..	1	0 11 0 ″	22 2	..	22 2	
196	Irving, R. J.	Shunter	..	1	0 11 0 ″	14 8	1 3	15 6	
197	Colthurst, J. H.	Guard	..	1	0 11 6 ″	17 1	..	17 1	Ditto.
198	Smith, P. J. H.	″	..	1	0 11 6 ″	14 5	..	14 5	
199	Crawley, R. F.	″	..	1	0 11 6 ″	16 11	..	16 11	Ditto.
200	Gillies, D. M.	″	..	1	0 11 6 ″	14 3	0 1	14 3	
201	Johnstone, T. C.	″	..	1	0 11 6 ″	18 8	..	18 8	
202	Matthews, W. T.	″	..	1	0 11 6 ″	17 9	..	17 9	Ditto.
203	Sparks, J.	″	..	1	0 11 6 ″	13 10	0 4	14 2	
204	Davis, G.	Signalman	..	1	0 11 0 ″	13 10	0 10	13 10	
205	McPherson, C.	Guard	..	1	0 11 6 ″	15 7	..	15 7	Ditto.
206	Shaab, A. M.	″	..	1	0 11 6 ″	4 4	8 1	12 5	
207	Dugdale, J. M.	Shunter	..	1	0 11 0 ″	4 4	22 5	8 8	
208	Nisbet, G. S.	Guard	..	1	0 11 6 ″	4 4	10 1	14 5	
209	Johnson, R.	″	..	1	0 11 6 ″	4 4	11 2	15 6	
210	Hope, G. G. M.	″	..	1	0 11 6 ″	4 4	10 0	14 4	
211	Smith, C. G.	″	..	1	0 11 6 ″	22 7	..	22 7	Ditto.
212	McLeod, D. M.	″	..	1	0 11 6 ″	29 7	..	29 7	
213	Horn, J.	″	..	1	0 11 6 ″	23 8	..	23 8	
214	Nelmes, W. W.	″	..	1	0 11 6 ″	21 8	..	21 8	
215	Fowler, G.	″	..	1	0 11 6 ″	19 11	..	19 11	
216	Lee, A. J.	Storeman	..	1	0 11 0 ″	16 8	3 3	19 11	
217	Gordon, D.	Guard	..	1	0 11 6 ″	19 7	..	19 7	
218	De Rosa, J.	″	..	1	0 11 6 ″	19 4	..	19 4	
219	Wakeling, W. N.	″	..	1	0 11 6 ″	19 9	..	19 9	
220	Megson, W. A.	″	..	1	0 11 6 ″	20 0	..	20 0	
221	Taylor, G. E. J.	″	..	1	0 11 6 ″	19 2	..	19 2	Ditto.
222	Scully, T.	″	..	1	0 11 6 ″	19 0	..	19 0	
223	Inch, E.	″	..	1	0 11 6 ″	17 9	1 4	19 1	
224	Lowe, A. J.	″	..	1	0 11 6 ″	17 7	1 2	18 9	
225	Stewart, R. C.	″	..	1	0 11 6 ″	18 5	..	18 5	
226	Mitchell, J.	″	..	1	0 11 6 ″	13 5	3 0	16 6	
227	Green, M. G.	Storeman	..	1	0 11 0 ″	22 7	..	22 7	

Railway Department Classification, 1913—*continued.*

SECOND DIVISION—*continued.*

Class 1: Traffic and Stores—continued.

Prog. No.	Name.	Classification. Designation.	Subclass.	Grade.	Rate of Pay	Service Since last appointed.	Service Prior to Date last appointed.	Service For Superannuation Purposes.	Remarks.
					£ s. d.	Y. M.	Y. M.	Y. M.	
228	Jory, J.	Storeman		1	0 11 0 per diem	21 1	..	..	
229	Paterson, R. D. M.	Signalman		1	0 11 0 „	23 4	..	23 4	
230	Adkins, T.	Guard		1	0 11 6 „	19 4	0 2	19 4	From date of taking up Guard's duties.
231	Swallow, F.	Storeman		1	0 11 0 „	16 0	..	16 0	
232	Donnelly, O. D.	„		1	0 11 0 „	20 8	..	21 5	
233	Houlahan, P.	Guard		1	0 11 6 „	15 11	..	15 11	Ditto.
234	Adkins, G.	„		1	0 11 6 „	18 9	..	18 9	Ditto.
235	Brown, W.	„		1	0 11 6 „	13 2	0 3	13 5	
236	Douds, J.	„		1	0 11 6 „	13 0	6 2	13 0	
237	Hall, W. C. R.	„		1	0 11 6 „	19 0	..	19 0	
238	Roulston, W. R.	Signalman		1	0 11 0 „	16 4	..	16 4	
239	Lloyd, J. A.	Guard		1	0 11 6 „	17 1	..	17 1	
240	Philip, A.	Storeman		1	0 11 0 „	21 7	..	21 7	
241	Barry, P. J. J.	Guard		1	0 11 0 „	20 7	..	20 7	
242	Devlin, J. L.	Signalman		1	0 11 0 „	13 3	4 4	13 3	
243	Duncan, A.	Guard		1	0 11 0 „	16 1	..	16 1	
244	Treneary, R.	„		1	0 11 0 „	18 1	..	18 1	
245	Wells, W. E. A.	Shunter		1	0 11 0 „	22 11	..	22 11	
246	Ayling, E. W.	Signalman		1	0 11 0 „	13 0	..	13 0	To take up duty as Signalman.
247	Sturgess, E. G.	Shunter		1	0 11 0 „	12 11	..	12 11	
248	McMorran, W.	Signalman		1	0 11 0 „	12 19	..	12 11	
249	Houlding, W. H.	„		1	0 11 0 „	12 1	0 1	12 11	Ditto.
250	Evans, T. E.	„		1	0 11 0 „	15 14	..	15 11	
251	Middleton, H. J.	„		1	0 11 0 „	17 2	..	17 4	Ditto.
252	Burns, H.	„		1	0 11 0 „	16 9	..	16 2	Ditto.
253	Ware, E. E.	„		1	0 11 0 „	12 8	..	12 9	
254	Evans, G. E. J.	„		1	0 11 0 „	12 8	2 11	14 7	
255	Butler, J.	„		1	0 11 0 „	12 7	0 6	12 11	Ditto.
256	Lyons, H. A.	„		1	0 11 0 „	12 7	0 3	12 11	
257	Watson, T. C.	„		1	0 11 0 „	12 7	..	12 7	Ditto.
258	Quinn, P. W.	„		1	0 11 0 „	12 1	..	12 7	Ditto.
259	McKearney, M. P.	„		1	0 11 0 „	16 16	..	16 11	Ditto.
260	Barry, S. J.	„		1	0 11 0 „	12 5	..	12 6	Ditto.
261	Hall, O. J.	„		1	0 11 0 „	12 5	..	12 5	Ditto.
262	White, J.	„		1	0 11 0 „	12 4	..	12 5	Ditto.
263	O'Brien, T.	„		1	0 11 0 „	12 2	..	12 4	Ditto.
264	Lamberton, T.	„		1	0 11 0 „	12 1	..	12 2	Ditto.
265	Merron, T.	„		1	0 11 0 „	23 18	..	23 11	
266	Smith, J.	Storeman		1	0 11 0 „	26 0	..	26 8	
267	Campbell, J. M.	Signalman		1	0 11 0 „	14 19	..	14 10	
268	May, W. H.	Storeman		1	0 11 0 „	17 0	..	17 9	
269	Hill, F. W.	„		1	0 11 0 „	13 6	..	13 0	
270	Warren, G.	„		1	0 11 0 „	12 7	..	12 6	
271	Hailwood, J.	„		1	0 11 0 „	15 8	0 2	15 10	
272	Matheson, L. F.	Shunter		1	0 11 0 „	12 7	2 6	12 8	
273	Crawford, J. S.	Signalman		1	0 11 0 „	12 6	..	12 7	Ditto.
274	Lawrence, W. J.	Shunter		1	0 11 0 „	12 3	..	12 6	
275	Stone, H.	Storeman		1	0 11 0 „	12 3	..	12 3	
276	Vial, M. J. R.	Signalman		1	0 11 0 „	12 3	..	12 3	Ditto.
277	Coles, C. W.	Storeman		1	0 11 0 „	12 3	..	12 3	
278	Divers, J. R.	Signalman		1	0 11 0 „	12 8	..	12 3	
279	Webber, J.	Shunter		1	0 11 0 „	16 1	..	16 8	
280	Fahey, J.	„		1	0 11 0 „	22 15	..	22 11	
281	Mikkelson, A.	„		1	0 11 0 „	12 8	..	12 5	
282	Downey, C. H.	„		1	0 11 0 „	15 1	..	15 8	
283	Ware, J. A.	Storeman		1	0 11 0 „	12 0	1 6	12 6	
284	Highet, W.	Shunter		1	0 11 0 „	12 0	..	12 0	
285	McDougall, A.	„		1	0 11 0 „	12 5	1 7	13 7	
286	Veitch, W. J.	Storeman		1	0 11 0 „	16 0	..	16 5	
287	Le Grange, H. C.	„		1	0 11 0 „	12 0	..	12 0	
288	Furlong, M.	Shunter		1	0 11 0 „	12 8	..	12 0	
289	Trevella, S. J.	Storeman		1	0 11 0 „	15 0	..	15 8	
290	Hobson, H. P.	Shunter		1	0 11 0 „	15 19	..	15 10	
291	Kemp, F. A.	„		1	0 11 0 „	15 9	..	15 9	
292	Smith, S. G.	„		1	0 11 0 „	15 0	..	15 9	
293	Brown, F. J.	„		1	0 11 0 „	15 12	..	15 10	
294	McLeod, G.	Signalman		1	0 11 0 „	16 1	..	16 2	
295	Reehal, J.	Shunter		1	0 11 0 „	14 11	..	14 11	
296	Tuck, C. J.	Signalman		1	0 11 0 „	15 11	..	15 11	Ditto.
297	Gosden, A.	Shunter		1	0 11 0 „	15 9	..	15 1	
298	Chesterman, W. O.	„		1	0 11 0 „	14 1	..	14 9	
299	Carr, H. F. M.	„		1	0 11 0 „	15 0	..	15 1	
300	Crawshaw, R.	„		1	0 11 0 „	12 7	..	12 0	
301	Bowman, R.	„		1	0 11 0 „	15 1	..	15 7	
302	Waugh, A. H.	Signalman		1	0 11 0 „	11 1	..	11 11	

RAILWAY DEPARTMENT CLASSIFICATION, 1913—*continued.*

SECOND DIVISION—*continued.*

Class 1: Traffic and Stores—continued.

Pro. No	Name	Classification				Service			Remarks.
		Designation.	Subclass.	Grade.	Rate of Pay	Since last appointed.	Prior to Date last appointed.	For Superannuation Purposes.	
					£ s. d.	Y. M.	Y. M.	Y. M.	
303	Retter, K. P. B.	Shunter		1	0 11 0 per diem	11 10	0 3	12 1	
304	Lambert, J.	„		1	0 10 6 „	11 10	0 1	11 11	
305	Dwyer, P.	„		1	0 11 0 „	11 8	0 3	11 11	
306	Gough, B.	„		1	0 11 0 „	11 8	0 1	11 9	
307	Melican, J. B. T.	„		1	0 11 0 „	11 5	2 1	13 6	
308	Cameron, Jas.	„		1	0 11 0 „	20 1	..	20 1	
309	Huston, W. T.	„		1	0 11 0 „	11 8	0 9	12 5	
310	Smith, R.	„		1	0 11 0 „	11 4	..	11 4	
311	Day, G. F. H.	„		1	0 11 0 „	11 1	..	11 1	
312	Maclean, A.	„		1	0 11 0 „	11 1	..	11 1	
313	Pirie, G. C.	„		1	0 11 0 „	11 0	0 6	11 6	
314	Dunn, M. J. W.	„		1	0 11 0 „	11 0	..	11 0	
315	Carruthers, M. T.	„		1	0 11 0 „	11 0	..	11 0	
316	Steele, T. W.	Signalman		1	0 10 6 „	14 9	..	14 9	To take up duty as Signalman.
317	Green, W. J. R.	Shunter		1	0 11 0 „	14 4	..	14 4	
318	Baird, W. A.	„		1	0 11 0 „	16 5	..	16 5	
319	Glasgow, T. G.	„		1	0 11 0 „	15 1	..	15 1	
320	Wilson, J. C.	„		1	0 11 0 „	15 1	..	15 1	
321	Scott, A. E.	„		1	0 11 0 „	14 4	..	14 4	
322	Shea, J. T.	„		1	0 11 0 „	16 1	..	16 1	
323	Wyatt, J. F.	„		1	0 11 0 „	15 10	..	15 10	
324	O'Kane, W. J.	„		1	0 11 0 „	14 8	..	14 8	
325	Stephen, R.	„		1	0 11 0 „	14 11	..	14 11	
326	Treeby, G. R.	„		1	0 11 0 „	15 8	..	15 8	
327	Pickering, J.	„		1	0 11 0 „	15 1	..	15 1	
328	Roi, A. W.	„		1	0 11 0 „	15 2	..	15 2	
329	Henderson, A.	„		1	0 11 0 „	11 0	..	11 0	
330	Lawrence, W. H.	„		1	0 11 0 „	11 0	..	11 0	
331	Pasley, W. S.	„		1	0 10 6 „	12 1	0 7	12 7	
332	Mewburn, J.	„		1	0 10 6 „	12 0	..	12 0	
333	Murtagh, J.	„		1	0 10 6 „	10 11	2 3	13 2	
334	Henry, T.	„		1	0 10 6 „	10 11	..	10 11	
335	Allan, J.	„		1	0 11 0 „	10 10	..	10 10	
336	Dickson, J. C.	„		1	0 10 6 „	10 10	..	10 10	
337	Marryatt, R. C.	„		1	0 10 6 „	10 10	..	10 10	
338	Rowse, D.	„		1	0 10 6 „	10 10	..	10 10	
339	Martin, A. F.	„		1	0 10 6 „	10 7	..	10 7	
340	Stuart, T.	„		1	0 10 6 „	11 3	1 10	12 3	
341	Fitzgerald, T. J.	„		1	0 10 6 „	10 8	3 2	13 4	
342	Dash, C. E.	„		1	0 10 6 „	10 3	..	10 3	
343	Herbert, F.	„		1	0 11 0 „	10 1	..	10 1	
344	Small, A. C.	„		1	0 10 6 „	10 1	..	10 1	
345	Currie, W.	„		1	0 10 6 „	10 0	..	10 0	
346	Johnston, J. W.	Storeman		1	0 10 6 „	30 8	..	30 8	
347	Sandys, E. N.	Signalman		1	0 10 6 „	12 7	..	12 7	From date of taking up duty as Signalman.
348	Tate, A. J.	Shunter		1	0 10 6 „	15 11	..	15 11	From date of taking up duty as Shunter.
349	Sheehan, J.	„		1	0 10 6 „	14 6	..	14 6	Ditto.
350	Ball, H.	Signalman		1	0 10 6 „	13 10	0 10	14 6	
351	Vowless, W. J.	Storeman		1	0 10 6 „	22 3	..	22 3	
352	Donaldson, J.	Shunter		1	0 10 6 „	12 4	..	12 4	
353	Brook, J. W.	Storeman		1	0 10 6 „	12 0	..	12 0	
354	Lambert, C. T.	„		1	0 10 6 „	11 11	0 2	12 1	
355	Schrader, W. H. G.	Signalman		1	0 10 6 „	11 10	..	11 10	
356	Barry, E.	Shunter		1	0 10 6 „	11 8	..	11 8	
357	Borlase, J. A.	Signalman		1	0 10 6 „	11 7	..	11 7	
358	Burns, J. G.	Shunter		1	0 10 6 „	11 6	..	11 6	Ditto.
359	Gardner, B. H.	Storeman		1	0 10 6 „	11 6	11 8	11 6	
360	Hunter, E. G.	Signalman		1	0 10 6 „	11 6	0 2	11 8	
361	Irwin, T.	Storeman		1	0 10 6 „	17 1	..	17 1	
362	Macdonald, D.	Signalman		1	0 10 6 „	11 5	0 11	..	
363	Wallis, J.	Storeman		1	0 10 6 „	10 0	2 8	12 8	From date of taking up duty as Storeman.
364	Barltrop, F.	„		1	0 10 6 „	11 0	..	11 0	Ditto.
365	Nolan, D.	Signalman		1	0 10 6 „	10 10	..	10 10	
366	Neill, J.	Storeman		1	0 10 6 „	10 10	..	10 10	
367	Russell, D.	Signalman (Oamaru)		1	0 10 6 „	10 10	..	10 10	
368	Dickel, A.	Shunter		1	0 10 6 „	10 10	..	10 10	From date of taking up duty as Shunter.
369	Smith, R. J.	Storeman		1	0 10 6 „	10 9	0 6	11 3	
370	Smith, J. L.	Shunter		1	0 10 6 „	19 1	..	19 1	Ditto.
371	Frandi, I. G.	„		1	0 10 6 „	10 6	..	10 6	Ditto.
372	Kracke, F. W. E.	„		1	0 10 6 „	11 11	2 10	12 5	
373	Tuck, W. M.	„		1	0 10 6 „	15 4	..	15 4	Ditto.

RAILWAY DEPARTMENT CLASSIFICATION, 1913—*continued.*

[SECOND DIVISION—*continued.*

Class 1 : Traffic and Stores—continued.

Prog. No.	Name.	Classification.				Service			Remarks.
		Designation.	Subclass.	Grade.	Rate of Pay.	Since last appointed.	Prior to Date last appointed.	For Superannuation Purposes.	
					£ s. d.	Y. M.	Y. M.	Y. M.	
374	Milne, J.	Shunter	..	1	0 10 6 per diem	12 10	..	12 10	From date of taking up duty as Shunter.
375	McIntyre, T.	〃	..	1	0 10 6 〃	13 2	..	13 2	Ditto.
376	Lucas, J. W.	〃	..	1	0 10 6 〃	14 4	..	14 4	Ditto.
377	Ibbotson, H.	〃	..	1	0 10 6 〃	15 4	..	15 4	
378	Sellars, G. W.	〃	..	1	0 10 6 〃	14 8	..	14 8	Ditto.
379	Jamieson, J. E.	〃	..	1	0 10 6 〃	13 9	..	13 9	Ditto.
380	Plank, J.	〃	..	1	0 10 6 〃	14 4	..	14 4	Ditto.
381	Harris, H.	〃	..	1	0 10 6 〃	14 3	..	14 3	Ditto.
382	*Harrison, R.	〃	..	1	0 10 6 〃	12 5	0 3	12 8	Ditto.
383	Brennan, J.	〃	..	1	0 10 6 〃	14 7	..	14 7	Ditto.
384	Pile, T.	〃	..	1	0 10 6 〃	12 6	..	12 6	Ditto.
385	Bamford, F. A.	〃	..	1	0 10 6 〃	12 4	..	12 4	Ditto.
386	Donaldson, T.	〃	..	1	0 10 6 〃	9 10	..	9 10	Ditto.
387	Russell, J. W.	〃	..	1	0 10 6 〃	9 9	..	9 9	Ditto.
388	Kearin, T. P.	〃	..	1	0 10 6 〃	9 9	..	9 9	Ditto.
389	Pidgeon, W. H.	〃	..	1	0 10 6 〃	9 8	..	9 8	Ditto.
390	Owers, W. R.	〃	..	1	0 10 6 〃	9 8	..	9 8	Ditto.
391	Fogden, E. H.	〃	..	1	0 10 6 〃	9 8	0 2	9 10	Ditto.
392	Crosby, J. H.	〃	..	1	0 10 6 〃	9 7	..	9 7	Ditto.
393	Greenwood, W. H.	〃	..	1	0 10 6 〃	9 6	..	9 6	Ditto.
394	Brown, A. G.	〃	..	1	0 10 6 〃	9 6	1 1	10 7	Ditto.
395	Scott, W.	〃	..	1	0 10 6 〃	9 6	..	9 6	
396	Leeden, W. J.	〃	..	1	0 10 6 〃	9 5	3 6	9 6	Ditto.
397	Banks, H. E. S.	〃	..	1	0 10 6 〃	11 8	..	11 8	Ditto.
398	Marriner, P. F.	〃	..	1	0 10 6 〃	10 10	0 6	11 4	Ditto.
399	Aitken, W. J.	〃	..	1	0 10 6 〃	9 4	0 10	10 2	
400	Benson, W.	〃	..	1	0 10 6 〃	9 3	1 1	9 7	Ditto.
401	Earland, P. C.	〃	..	1	0 10 6 〃	9 0	..	9 0	Ditto.
402	Ashton, J.	〃	..	1	0 10 6 〃	9 0	..	9 0	Ditto.
403	Johnson, J.	〃	..	1	0 10 6 〃	9 0	..	9 0	Ditto.
404	Washer, M. F.	〃	..	1	0 10 6 〃	9 0	0 2	9 2	Ditto.
405	Munn, W. G.	〃	..	1	0 10 6 〃	13 1	0 3	13 4	Ditto.
406	Hughes, W.	〃	..	1	0 10 6 〃	12 0	..	12 0	Ditto.
407	Tregoweth, F.	〃	..	1	0 10 6 〃	12 9	..	12 9	Ditto.
408	Kavanagh, E. F.	〃	..	1	0 10 6 〃	12 6	..	12 6	
409	Anderson, R. S.	〃	..	1	0 10 6 〃	13 5	..	13 5	Ditto.
410	McKone, W.	〃	..	1	0 10 6 〃	12 6	..	12 6	Ditto.
411	McIndoe, W. J.	〃	..	1	0 10 6 〃	13 0	..	13 0	Ditto.
1	Turner, W.	Guard	..	2	0 10 0 〃	30 10	..	30 10	
2	Riddell, A.	Signalman	..	2	0 10 0 〃	28 10	1 2	30 0	
3	Collingwood, W. F.	〃	..	2	0 10 0 〃	17 10	0 9	18 7	
4	Barron, J.	〃	..	2	0 10 0 〃	22 11	..	22 11	
5	Wilkes, A.	Guard	..	2	0 10 0 〃	18 11	..	18 11	
6	Quinn, J.	〃	..	2	0 10 0 〃	26 5	0 9	27 3	
7	Wallace, J. H.	Signalman	..	2	0 10 0 〃	12 11	1 2	13 5	
8	Morgan, J. T. E.	Storeman	..	2	0 10 0 〃	12 10	..	12 10	
9	Kelly, R.	Shunter	..	2	0 10 0 〃	12 5	..	12 5	
10	Auger, P.	Guard	..	2	0 10 0 〃	16 3	..	16 3	
11	King, J. E.	〃	..	2	0 10 0 〃	16 3	..	16 3	
12	Kerr, R. J. L.	〃	..	2	0 10 0 〃	15 4	..	15 4	
13	Kemp, J. C.	〃	..	2	0 10 0 〃	16 1	..	16 1	
14	Melican, M. T.	〃	..	2	0 10 0 〃	15 7	..	15 7	
15	Bateman, F. J.	〃	..	2	0 10 0 〃	15 8	..	15 8	
16	Murch, W. J.	〃	..	2	0 10 0 〃	18 7	..	18 7	
17	Simpson, W. F.	〃	..	2	0 10 0 〃	11 10	..	11 10	
18	Muirhead, J.	〃	..	2	0 10 0 〃	11 10	..	11 10	
19	Harris, J.	Storeman	..	2	0 10 0 〃	33 0	..	33 0	
20	Penman, C. R.	Guard	..	2	0 10 0 〃	12 5	..	12 5	
21	Sirett, A.	Storeman	..	2	0 10 0 〃	11 10	0 6	12 4	
22	Heyward, J. W.	Signalman	..	2	0 10 0 〃	11 9	..	11 9	
23	Payne, F.	Storeman	..	2	0 10 0 〃	11 8	0 11	12 7	
24	Thompson, F. R.	Guard	..	2	0 10 0 〃	11 6	..	11 6	
25	Shillito, A. E. S.	Storeman	..	2	0 10 0 〃	12 4	..	12 4	
26	Shepherd, R. G.	Guard	..	2	0 10 0 〃	12 3	0 3	12 6	
27	Forrest, F. D.	Storeman	..	2	0 10 0 〃	11 9	0 2	11 11	
28	Ridley, J. W.	Guard	..	2	0 10 0 〃	11 5	..	11 5	
29	Pope, F. R.	〃	..	2	0 10 0 〃	11 4	..	11 4	
30	Brown, W. E.	〃	..	2	0 10 0 〃	11 3	..	11 3	
31	Brown, James	〃 (Westport)	..	2	0 10 0 〃	11 3	..	11 3	
32	Shepherd, W. S.	〃	..	2	0 10 0 〃	14 1	..	14 1	
33	Bradley, W. J. H.	〃	..	2	0 10 0 〃	14 2	..	14 2	
34	Cadman, W. J.	〃	..	2	0 10 0 〃	15 1	..	15 1	
35	Bright, H. W.	Shunter	..	2	0 10 0 〃	11 0	..	11 0	
36	Gillespie, G.	Guard	..	2	0 10 0 〃	10 11	..	10 11	
37	Connett, G. S.	〃	..	2	0 10 0 〃	10 11	0 7	11 6	

RAILWAY DEPARTMENT CLASSIFICATION, 1913—*continued.*

SECOND DIVISION—*continued.*

Class 1: Traffic and Stores—continued.

Prog. No.	Name.	Classification.				Service			Remarks.
		Designation.	Subclass.	Grade.	Rate of Pay	Since last appointed.	Prior to Date last appointed.	For Superannuation Purposes.	
					£ s. d.	Y. M.	Y. M.	Y. M.	
38	Astle, L. G.	Guard	..	2	0 10 0 per diem	10 8	..	10 8	
39	McGonigle, W. J.	Signalman	..	2	0 10 0 „	10 8	..	10 8	
40	Shand, H. T.	Guard	..	2	0 10 0 „	10 8	..	10 8	
41	Kemp, A.	„	..	2	0 10 0 „	10 8	..	10 8	
42	Lincoln, F. G.	„	..	2	0 10 0 „	10 7	..	10 7	
43	Perfect, H. H.	Signalman	..	2	0 10 0 „	10 7	..	10 7	
44	Brown, J. M.	Storeman	..	2	0 10 0 „	10 6	4 1	14 7	
45	Baylis, J. T.	„	..	2	0 10 0 „	10 6	2 9	12 3	
46	Honeyfield, N. L.	„	..	2	0 10 0 „	10 6	..	10 6	
47	Gorinski, F.	„	..	2	0 10 0 „	13 7	0 3	13 10	
48	Westbrooke, B.	Signalman	..	2	0 10 0 „	11 3	0 9	11 3	
49	Thorn, J. S.	Storeman	..	2	0 10 0 „	10 4	..	10 4	
50	Earley, A. J.	Signalman	..	2	0 10 0 „	13 10	..	13 10	
51	Mackay, J. R.	Guard	..	2	0 10 0 „	15 11	..	15 11	
52	Harris, W. B.	Signalman	..	2	0 10 0 „	14 3	..	14 3	
53	Bradley, A.	Guard	..	2	0 10 0 „	12 7	..	12 7	
54	Roberts, G.	Signalman	..	2	0 10 0 „	9 11	4 0	9 11	
55	King, J.	„	..	2	0 10 0 „	9 8	..	9 8	
56	Moyle, W. S. E.	Storeman	..	2	0 10 0 „	9 6	1 10	11 4	
57	Hawkins, H. I.	Signalman	..	2	0 10 0 „	11 2	..	11 2	
58	Hackett, C.	„	..	2	0 10 0 „	9 1	..	9 1	
59	Herbert, H. H.	Storeman	..	2	0 10 0 „	9 1	..	9 1	
60	Thompson, C. B.	„	..	2	0 10 0 „	12 11	..	12 11	
61	Nevin, C. M.	Guard	..	2	0 10 0 „	13 0	..	13 0	
62	Smith, G. S.	„	..	2	0 10 0 „	13 8	..	13 8	
63	Hicks, R. I.	Signalman	..	2	0 10 0 „	12 11	..	12 11	
64	Dunne, F. C.	Guard	..	2	0 10 0 „	12 6	..	12 6	
65	Cole, F.	„	..	2	0 10 0 „	13 2	..	13 2	
66	Bolton, W. T.	„	..	2	0 10 0 „	13 7	..	13 7	
67	Stuart, W. A.	„	..	2	0 10 0 „	13 6	..	13 6	
68	Fitzpatrick, H. J.	„	..	2	0 10 0 „	13 0	..	13 0	
69	McIntosh, W.	„	..	2	0 10 0 „	12 1	..	12 1	
70	Maunder, R. R.	Signalman	..	2	0 10 0 „	14 1	0 2	14 3	
71	Verey, R.	„	..	2	0 10 0 „	11 6	..	11 6	
72	Strong, E. H.	„	..	2	0 10 0 „	13 4	..	13 4	
73	Adam, L. B.	„	..	2	0 10 0 „	11 2	..	11 2	
74	Wallace, A.	Guard	..	2	0 10 0 „	13 2	..	13 2	
75	Eastwood, E. H.	Signalman	..	2	0 10 0 „	14 2	..	14 2	
76	Clark, W. S.	Guard	..	2	0 10 0 „	12 6	0 5	12 11	
77	Loader, J.	„ (White-cliffs)	..	2	0 10 0 „	8 11	..	8 11	
78	Ellender, A. V.	Storeman	..	2	0 10 0 „	8 11	0 7	9 6	
79	Robertson, R.	Guard	..	2	0 10 0 „	8 11	11 5	8 11	
80	Young, H. T. D.	Signalman	..	2	0 10 0 „	8 10	..	8 10	
81	Aitken, J.	Guard	..	2	0 10 0 „	8 10	..	8 10	
82	Clark, C. D.	Signalman	..	2	0 10 0 „	8 10	..	8 10	
83	Jones, H. M.	Storeman	..	2	0 10 0 „	8 10	0 5	9 3	
84	Griffin, J.	„	..	2	0 10 0 „	8 9	..	8 9	
85	Upton, F. S.	Shunter	..	2	0 10 0 „	8 9	..	8 9	
86	Hazlehurst, W. M.	„	..	2	0 10 0 „	8 8	4 11	8 8	
87	Yates, R. C.	Storeman	..	2	0 10 0 „	8 8	0 3	8 11	
88	Callander, C. W. B.	Signalman	..	2	0 10 0 „	8 7	0 6	9 1	
89	Sutherland, J.	Storeman	..	2	0 10 0 „	8 7	..	8 7	
90	Coatman, H.	Signalman	..	2	0 10 0 „	8 7	..	8 7	
91	Denby, H. E.	Shunter	..	2	0 10 0 „	8 7	6 5	8 7	
92	Carmichael, T. H.	„	..	2	0 10 0 „	8 6	..	8 6	
93	O'Hara, J. M.	Guard	..	2	0 10 0 „	12 11	..	12 11	
94	Hickey, E. F.	Signalman	..	2	0 10 0 „	11 9	0 1	11 10	
95	Donaldson, R.	Guard	..	2	0 10 0 „	9 4	1 8	11 0	
96	McKellar, A. D.	„	..	2	0 10 0 „	9 1	2 3	11 4	
97	Ferguson, T. G.	Storeman	..	2	0 10 0 „	8 8	0 11	9 2	
98	Ffrost, A. E.	Signalman	..	2	0 10 0 „	8 6	..	8 6	
99	Perry, J. E.	Guard	..	2	0 10 0 „	8 6	..	8 6	
100	Carter, J. L.	„	..	2	0 10 0 „	8 6	3 9	12 3	
101	Close, P.	Shunter	..	2	0 10 0 „	8 6	..	8 6	
102	Gibson, W. C.	Signalman	..	2	0 10 0 „	8 5	..	8 6	
103	Gregory, G. W.	Storeman	..	2	0 10 0 „	8 5	0 2	8 7	
104	Caskie, W.	Guard	..	2	0 10 0 „	8 5	..	8 5	
105	Kennedy, J.	„	..	2	0 10 0 „	8 5	..	8 5	
106	Macandrew, J. M.	Storeman	..	2	0 10 0 „	8 4	..	8 4	
107	Griffiths, W.	Signalman	..	2	0 10 0 „	8 4	0 3	8 7	
108	Hunter, W. J.	Shunter	..	2	0 10 0 „	8 4	0 9	9 1	
109	Reilly, E.	Storeman	..	2	0 10 0 „	8 4	..	8 4	
110	Cook, W. A.	Signalman	..	2	0 10 0 „	8 4	..	8 4	
111	Davin, P.	Guard	..	2	0 10 0 „	8 4	..	8 4	
112	Atkinson, L. A.	„	..	2	0 10 0 „	8 4	..	8 4	
113	Evans, T. W.	Shunter	..	2	0 10 0 „	8 4	..	8 4	
114	Campbell, A.	Guard	..	2	0 10 0 „	8 4	0 1	8 5	

RAILWAY DEPARTMENT CLASSIFICATION, 1913—*continued.*

SECOND DIVISION—*continued.*

Class 1: Traffic and Stores—continued.

Prog. No.	Name.	Classification.				Service			Remarks.
		Designation.	Subclass.	Grade.	Rate of Pay	Since last appointed.	Prior to Date last appointed.	For Superannuation Purposes.	
					£ s. d.	Y. M.	Y. M.	Y. M.	
115	O'Mahoney, J.	Guard		2	0 10 0 per diem	8 4	..	8 4	
116	Walker, R. W.	Shunter		2	0 10 0 „	8 4	..	8 4	
117	Hollier, W. E.	Signalman		2	0 10 0 „	8 4	1 1	9 5	
118	Hammond, A. M.	Guard		2	0 10 0 „	8 3	2 3	10 7	
119	Anderson, C. A.	Signalman		2	0 10 0 „	8 3	..	8 3	
120	White, D. S.	„		2	0 10 0 „	8 3	..	8 3	
121	Harvey, G. E.	Guard		2	0 10 0 „	8 3	0 4	8 7	
122	Charles, W.	„		2	0 10 0 „	8 3	..	8 3	
123	Brown, S.	„		2	0 10 0 „	8 2	..	8 2	
124	Whyte, R. L.	„		2	0 10 0 „	8 2	..	8 2	
125	Eden, W. C.	Signalman		2	0 10 0 „	8 2	..	8 2	
126	Menzies, C. H.	„		2	0 10 0 „	8 1	..	8 1	
127	Cain, J.	Guard		2	0 10 0 „	8 1	0 3	8 4	
128	Cortissos, A. E.	„		2	0 10 0 „	8 1	..	8 1	
129	Jackson, W. H.	Signalman		2	0 10 0 „	8 1	..	8 1	
130	Kelly, W. H.	„		2	0 10 0 „	8 0	..	8 0	
131	Raleigh, P. J.	Guard		2	0 10 0 „	7 11	2 2	10 1	
132	Dale, A. E.	Storeman		2	0 10 0 „	7 11	..	7 11	
133	Farnsworth, E. E.	Guard		2	0 10 0 „	4 4	5 1	9 5	
134	O'Sullivan, D.	„		2	0 10 0 „	4 4	8 11	9 2	
135	Johnson, J. P.	„		2	0 10 0 „	4 4	9 3	13 7	
136	Jones, J. T.	„		2	0 10 0 „	4 4	5 10	10 2	
137	Sanderson, J.	„		2	0 10 0 „	4 4	14 11	6 7	
138	Coles, A.	Storeman		2	0 10 0 „	4 4	6 2	10 6	
139	Brady, J. T.	Guard		2	0 10 0 „	4 4	2 4	6 8	
140	Kerins, T. E.	„		2	0 10 0 „	4 4	4 1	8 5	
141	Dale, A.	Storeman		2	0 10 0 „	8 0	0 3	8 3	
142	Arnott, J.	Signalman		2	0 10 0 „	7 11	0 6	8 5	
143	Anderson, H. A. M.	„		2	0 10 0 „	7 10	0 1	7 11	
144	Newman, B.	Guard		2	0 10 0 „	7 10	..	7 10	
145	Murray, J. G.	Shunter		2	0 10 0 „	7 10	..	7 10	
146	Cooney, J.	Signalman		2	0 10 0 „	7 10	..	7 10	
147	McNeill, J.	Storeman		2	0 10 0 „	7 9	0 1	7 10	
148	McEwen, R. J.	Signalman		2	0 10 0 „	7 9	..	7 9	
149	McLaren, J.	Guard		2	0 10 0 „	7 9	2 0	9 9	
150	Dillon, F.	Shunter		2	0 10 0 „	7 8	..	7 8	
151	Cox, H. P.	„		2	0 10 0 „	7 8	..	7 8	
152	Lawrence, G. C.	Guard		2	0 10 0 „	7 8	0 2	7 10	
153	Sutton, C. A.	Signalman		2	0 10 0 „	7 7	..	7 7	
154	Williams, T.	Storeman		2	0 10 0 „	7 7	..	7 7	
155	Nelson, W. G.	„		2	0 10 0 „	7 6	..	7 6	
156	McIntyre, T. H.	Guard		2	0 10 0 „	7 6	..	7 6	
157	Sharpe, A. J.	„		2	0 10 0 „	7 6	0 7	8 1	
158	Duller, H. R.	Signalman		2	0 10 0 „	7 6	..	7 6	
159	McNulty, J. M.	„		2	0 10 0 „	7 6	..	7 6	
160	Martin, W. G.	Guard		2	0 10 0 „	7 6	..	7 6	
161	Wilson, J.	„		2	0 10 0 „	7 6	7 2	7 6	
162	Cade, G.	Signalman		2	0 10 0 „	7 6	0 1	7 7	
163	Ellis, T. R.	„		2	0 10 0 „	7 5	..	7 5	
164	Mintrom, W.	Shunter		2	0 10 0 „	7 4	..	7 4	
165	Brosnan, C. J.	Guard		2	0 10 0 „	7 4	..	7 4	
166	Watt, D.	„		2	0 10 0 „	7 3	..	7 3	
167	Scully, T. J.	Signalman		2	0 10 0 „	7 3	..	7 3	
168	Sewell, E.	„		2	0 10 0 „	7 2	..	7 2	
169	Harvey, A. J. G.	Guard		2	0 10 0 „	7 2	..	7 2	
170	Wiggins, J. H.	Signalman		2	0 10 0 „	7 2	0 3	7 5	
171	DeLacey, H. A.	Guard		2	0 10 0 „	7 2	..	7 2	
172	Nelson, H. J.	„		2	0 10 0 „	7 2	..	7 2	
173	Cloke, E.	Storeman		2	0 10 0 „	11 10	2 0	13 10	
174	Hirst, J. W.	Guard		2	0 10 0 „	18 11	..	18 11	
175	Nelson, J. W.	Storeman		2	0 10 0 „	11 2	0 1	11 3	
176	Moore, C. C.	Guard		2	0 10 0 „	11 0	..	11 0	
177	Robertson, T.	„		2	0 10 0 „	12 3	0 9	12 8	
178	Morris, A. R.	„		2	0 10 0 „	10 1	..	10 1	
179	Bartosh, T.	Signalman		2	0 10 0 „	11 6	..	11 6	
180	Ramsay, J. F.	Guard		2	0 10 0 „	10 10	0 4	11 0	
181	Ryan, M.	„		2	0 10 0 „	12 11	0 7	13 6	
182	White, W. J.	„		2	0 10 0 „	10 7	2 8	13 3	
183	Lennard, C. T.	„		2	0 10 0 „	10 5	..	10 5	
184	Kelly, M.	Storeman		2	0 10 0 „	19 6	..	19 6	
185	Noedl, H. C.	Guard		2	0 10 0 „	9 4	2 3	11 7	
186	Ritchie, D.	„		2	0 10 0 „	14 4	..	14 4	
187	Scott, J. O.	„		2	0 10 0 „	15 10	..	15 10	
188	Kiely, P. J.	Signalman		2	0 10 0 „	14 10	..	14 10	
189	Burke, T.	Guard		2	0 10 0 „	12 3	0 10	13 1	
190	Laming, J. E.	„		2	0 10 0 „	11 1	1 11	13 0	
191	Feron, P. E.	Storeman		2	0 10 0 „	10 9	1 1	11 0	

RAILWAY DEPARTMENT CLASSIFICATION, 1913—*continued.*

SECOND DIVISION—*continued.*

Class 1: Traffic and Stores—continued.

Prog. No.	Name.	Classification				Service			Remarks.
		Designation.	Subclass.	Grade.	Rate of Pay.	Since last appointed.	Prior to Date last appointed.	For Superannuation Purposes.	
					£ s. d.	Y. M.	Y. M.	Y. M.	
192	McVinnie, D...	Signalman	..	2	0 10 0 per diem	10 2	1 0	10 7	
193	Crowe, A. R.	Guard	..	2	0 10 0 „	9 10	0 3	10 1	
194	Clarke, S.	„	..	2	0 10 0 „	9 6	2 6	10 7	
195	O'Connor, M.	Shunter	..	2	0 10 0 „	9 2	0 8	9 6	
196	Corrie, J. A.	„	..	2	0 10 0 „	9 1	0 7	9 6	
197	Lilly, J. P.	Signalman	..	2	0 10 0 „	8 11	0 1	9 0	
198	Carr, W. J.	Guard	..	2	0 10 0 „	8 7	0 3	8 10	
199	Brunton, H. W.	Storeman	..	2	0 10 0 „	8 7	5 10	10 6	
200	Waite, A.	Guard	..	2	0 10 0 „	8 6	1 1	9 8	
201	Russell, D.	Signalman (Milton)	..	2	0 10 0 „	8 4	..	8 4	
202	Monkley, W. H.	Guard	..	2	0 10 0 „	8 3	0 4	8 7	
203	McNickel, A. W.	Shunter	..	2	0 10 0 „	8 1	..	8 1	
204	Dryden, A. P...	„	..	2	0 10 0 „	8 0	0 3	8 2	
205	Willett, R.	„	..	2	0 10 0 „	7 11	0 4	8 3	
206	Simpson, G.	„	..	2	0 10 0 „	7 10	..	7 10	
207	Tawhai, H. T.	„	..	2	0 10 0 „	7 4	..	7 4	
208	Lorimer, J.	„	..	2	0 10 0 „	7 3	..	7 3	
209	Hooper, E. C.	Signalman	..	2	0 10 0 „	7 1	..	7 1	
210	Pickup, J.	Guard	..	2	0 10 0 „	7 1	..	7 1	
211	Petherick, A. L. R.	„	..	2	0 10 0 „	11 9	0 3	12 0	
212	Walsh, T. J.	Shunter	..	2	0 10 0 „	7 0	..	7 0	
213	Walker, E. L.	Guard	..	2	0 9 6 „	7 0	..	7 0	
214	Colclough, F...	„	..	2	0 10 0 „	7 0	0 1	7 2	
215	Rae, J. C.	„	..	2	0 10 0 „	11 10	..	11 10	
216	Dunsmuir, A...	„	..	2	0 10 0 „	11 10	0 4	11 2	
217	Barr, B. J.	Shunter	..	2	0 10 0 „	11 0	..	11 0	
218	McErlean, J. P.	Guard	..	2	0 10 0 „	11 9	..	11 9	
219	Holloway, W. H.	„	..	2	0 10 0 „	11 9	..	11 9	
220	Petherbridge, A.	Signalman	..	2	0 10 0 „	11 9	..	12 0	
221	Oben, C.	Guard	..	2	0 10 0 „	11 1	..	11 1	
222	Gordon, J. A...	„	..	2	0 10 0 „	11 1	..	11 1	
223	Cassidy, F.	Signalman	..	2	0 10 0 „	13 6	..	13 6	
224	Rose, R. A.	Guard	..	2	0 10 0 „	13 0	..	13 0	
225	Muir, J.	„	..	2	0 10 0 „	11 0	..	11 0	
226	Donovan, J. C.	„	..	2	0 10 0 „	12 9	..	12 9	
227	Ford, J. R.	Signalman	..	2	0 10 0 „	11 0	..	11 0	
228	Jackson, R.	Shunter	..	2	0 10 0 „	7 0	..	7 0	
229	Findon, R. J...	Guard	..	2	0 10 0 „	7 0	..	7 0	
230	Green, T. F.	Shunter	..	2	0 10 0 „	7 0	..	7 0	
231	Creagh, J	Guard	..	2	0 10 0 „	7 0	..	7 0	
232	Christie, J. G...	Shunter	..	2	0 10 0 „	6 11	..	6 11	
233	Fairbairn, R. E.	Storeman	..	2	0 10 0 „	6 11	..	6 11	
234	Ainsworth, J...	Shunter	..	2	0 10 0 „	6 11	..	6 11	
235	Henricksen, F. H.	Guard	..	2	0 10 0 „	6 11	..	6 11	
236	Griffiths, J. B. R.	Signalman	..	2	0 10 0 „	6 10	0 2	7 0	
237	Quill, N. K.	Shunter	..	2	0 10 0 „	6 10	..	6 10	
238	Cowles, W. H.	„	..	2	0 10 0 „	6 10	..	6 10	
239	Fitzgerald, J...	Storeman	..	2	0 10 0 „	9 5	0 11	10 4	
240	Welsh, R.	„	..	2	0 10 0 „	8 7	0 6	8 10	
241	Murray, A.	Signalman	..	2	0 10 0 „	8 10	1 6	10 4	
242	Shinnick, P. E.	Storeman	..	2	0 10 0 „	7 3	0 9	7 10	
243	Black, W.	Signalman	..	2	0 10 0 „	7 1	..	7 1	
244	Dunstall, J.	Storeman	..	2	0 10 0 „	7 0	..	7 0	
245	Trevella, A. J.	Shunter	..	2	0 10 0 „	6 10	..	6 10	
246	Everest, F. W.	Guard	..	2	0 10 0 „	6 10	..	6 10	
247	Paull, E.	Signalman	..	2	0 10 0 „	6 11	..	6 11	
248	Williams, A. V.	Shunter	..	2	0 10 0 „	6 9	0 4	7 1	
249	Moonie, W. A.	Guard	..	2	0 10 0 „	6 9	..	6 9	
250	Rich, G. A.	Signalman	..	2	0 10 0 „	6 9	..	6 9	
251	Travis, C. A. M.	Shunter	..	2	0 10 0 „	6 9	..	6 9	
252	Hooton, J. H...	Guard	..	2	0 10 0 „	6 9	..	6 9	
253	Howarth, W...	„	..	2	0 10 0 „	6 9	0 2	6 11	
254	Langford, L. A.	Signalman	..	2	0 10 0 „	6 8	..	6 8	
255	Cook, J.	„	..	2	0 10 0 „	6 8	..	6 8	
256	Stone, J. W.	Shunter	..	2	0 10 0 „	6 8	..	6 8	
257	Rosser, M.	Guard	..	2	0 10 0 „	6 8	..	6 8	
258	Keating, W. P.	Storeman	..	2	0 10 0 „	7 0	2 1	9 1	
259	Dobson, E. G.	Guard	..	2	0 10 0 „	6 7	..	6 7	
260	Mills, R.	„	..	2	0 10 0 „	6 7	..	6 7	
261	Harris, John	Shunter	..	2	0 10 0 „	6 7	..	6 7	
262	Dreaver, J. G.	„	..	2	0 10 0 „	6 7	..	6 7	
263	Brosnahan, H.	„	..	2	0 10 0 „	6 7	..	6 7	
264	MacMillan, A.	„	..	2	0 9 6 „	6 7	..	6 7	
265	Wilson, T. P...	„	..	2	0 10 0 „	6 7	..	6 7	
266	Montgomery, R.	Guard	..	2	0 10 0 „	6 7	..	6 7	
267	Henderson, A. J. S. T...	Signalman	..	2	0 10 0 „	6 6	0 6	6 6	
268	Doyle, J. J.	Guard	..	2	0 10 0 „	8 5	..	8 5	

RAILWAY DEPARTMENT CLASSIFICATION, 1913—*continued.*

SECOND DIVISION—*continued.*

Class 1: Traffic and Stores—continued.

Prog. No.	Name.	Classification.				Service			Remarks.
		Designation.	Subclass.	Grade.	Rate of Pay.	Since last appointed.	Prior to Date last appointed.	For Superannuation Purposes.	
					£ s. d.	Y. M.	Y. M.	Y. M.	
269	Cammock, J.	Signalman	..	2	0 10 0 per diem	25 5	..	25 5	
270	MacDonald, A.	„	..	2	0 10 0 „	10 8	..	10 8	
271	Morris, E.	„	..	2	0 10 0 „	4 4	5 1	9 5	
272	Cummins, W. J.	Storeman	..	2	0 10 0 „	11 5	..	11 5	
273	Bradding, H. L.	„	..	2	0 10 0 „	11 1	2 4	13 5	
274	Mahoney, E.	Guard	..	2	0 9 6 „	10 10	..	10 10	
275	Gregory, J. W.	Shunter	..	2	0 10 0 „	7 8	0 10	8 6	
276	Siddle, M.	Guard	..	2	0 10 0 „	7 6	..	7 6	
277	Harvey, W. A.	„	..	2	0 10 0 „	7 0	..	7 0	
278	Stanley, W. F.	„	..	2	0 10 0 „	6 8	..	6 8	
279	O'Neill, J. A.	Shunter	..	2	0 10 0 „	6 6	..	6 6	
280	Bellini, H. W.	Guard	..	2	0 10 0 „	6 5	..	6 5	
281	Hall, T.	„	..	2	0 10 0 „	6 5	..	6 5	
282	Pepper, G. T.	Shunter	..	2	0 10 0 „	6 5	..	6 5	
283	Myers, D.	Guard	..	2	0 10 0 „	6 5	..	6 5	
284	Harley, W. W.	Storeman	..	2	0 10 0 „	6 5	0 3	6 7	
285	Robinson, W. H.	Guard	..	2	0 10 0 „	6 5	0 6	6 1	
286	Peachey, F.	Shunter	..	2	0 10 0 „	6 5	..	6 5	
287	English, P.	„	..	2	0 10 0 „	6 5	..	6 5	
288	Wainscott, H.	Guard	..	2	0 10 0 „	6 4	..	6 4	
289	Watts, H. A.	Signalman	..	2	0 10 0 „	6 4	..	6 4	
290	Oliver, W. J.	Shunter	..	2	0 10 0 „	6 4	1 6	7 10	
291	Donaldson, J. R.	Guard	..	2	0 10 0 „	6 3	..	6 3	
292	Chambers, J.	Storeman	..	2	0 10 0 „	6 6	0 7	7 1	
293	Thomas, J. H.	„	..	2	0 10 0 „	6 5	..	6 5	
294	Simmons, T.	Guard	..	2	0 10 0 „	6 3	0 6	6 9	
295	Donohoe, A.	Signalman	..	2	0 10 0 „	6 6	0 1	6 7	
296	Ross, A.	„	..	2	0 10 0 „	6 2	..	6 2	
297	Ryan, M. J.	Shunter	..	2	0 10 0 „	6 2	..	6 2	
298	Gibson, A. D.	„	..	2	0 10 0 „	6 2	..	6 2	
299	Leahy, D.	„	..	2	0 10 0 „	6 2	..	6 2	
300	Holland, W.	Signalman	..	2	0 10 0 „	6 2	..	6 2	
301	Douch, A. E.	Guard	..	2	0 10 0 „	6 2	..	6 2	
302	Neill, T.	Shunter	..	2	0 10 0 „	6 1	..	6 1	
303	Flynn, W. D.	Guard	..	2	0 10 0 „	6 1	..	6 1	
304	Cunniffe, J.	„	..	2	0 10 0 „	6 1	..	6 1	
305	Murphy, C.	Storeman	..	2	0 9 6 „	6 3	..	6 3	
306	Dickey, W.	„	..	2	0 10 0 „	6 3	..	6 3	
307	Buckley, H. H.	„ (Stores)	..	2	0 10 0 „	6 2	..	6 2	
308	Cooper, G. L.	Guard	..	2	0 10 0 „	11 0	..	11 0	
309	Reid, D.	„	..	2	0 10 0 „	11 0	..	11 0	
310	Wares, D.	„	..	2	0 10 0 „	11 0	..	11 0	
311	Hislop, G. K.	„	..	2	0 10 0 „	10 11	..	10 11	
312	Rodgers, F.	Signalman	..	2	0 10 0 „	10 10	..	10 10	
313	Newton, W. R.	Guard	..	2	0 10 0 „	10 9	..	10 9	
314	Cameron, J.	Signalman (Pukekohe)	..	2	0 10 0 „	10 9	..	10 9	
315	Beary, P. G.	Shunter	..	2	0 10 0 „	10 8	..	10 8	
316	Rafter, T. A.	Guard	..	2	0 10 0 „	10 8	..	10 8	
317	Reeves, A. H.	„	..	2	0 10 0 „	10 8	..	10 8	
318	Simpson, E. G.	Signalman	..	2	0 10 0 „	15 0	..	15 0	
319	Page, S.	Guard	..	2	0 10 0 „	10 10	..	10 10	
320	Nelson, J.	„	..	2	0 10 0 „	10 6	..	10 6	
321	Butcher, W.	Storeman	..	2	0 10 0 „	10 7	0 9	11 2	
322	Davis, C. A.	„	..	2	0 10 0 „	10 11	..	10 11	
323	Bridson, K. D.	„	..	2	0 10 0 „	11 10	..	11 10	
324	Jory, T. M.	Shunter	..	2	0 10 0 „	10 4	..	10 4	
325	Robson, G.	Guard	..	2	0 10 0 „	10 2	0 4	10 2	
326	Ullrich, A.	„	..	2	0 10 0 „	10 2	..	10 2	
327	Tietjens, F. T.	„	..	2	0 10 0 „	10 2	..	10 2	
328	O'Neill, M.	Shunter	..	2	0 10 0 „	5 11	0 7	6 6	
329	Trotter, M. G.	Guard	..	2	0 10 0 „	5 11	..	5 11	
330	Archibald, R.	Shunter	..	2	0 10 0 „	5 11	..	5 11	
331	Thomas, H. W.	„	..	2	0 10 0 „	5 11	0 1	6 0	
332	Sweeney, C.	Guard	..	2	0 10 0 „	5 11	..	5 11	
333	Scullion, F.	„	..	2	0 10 0 „	5 10	0 3	6 1	
334	Allkins, L. H. W.	„	..	2	0 10 0 „	5 10	..	5 10	
335	Roberts, E.	„	..	2	0 10 0 „	5 10	0 3	6 1	
336	Milner, J. J.	Shunter	..	2	0 10 0 „	5 10	..	5 10	
337	Parker, F. R.	Signalman	..	2	0 10 0 „	5 9	..	5 9	
338	Playter, H. C.	Storeman (Stores)	..	2	0 10 0 „	5 9	4 10	10 7	
339	Liddy, J.	„	..	2	0 10 0 „	5 9	..	5 9	
340	Voyce, L. C.	Shunter	..	2	0 10 0 „	5 9	..	5 9	
341	Afford, A.	Storeman	..	2	0 10 0 „	5 9	1 0	6 9	
342	Thomson, J. G.	Guard	..	2	0 10 0 „	5 9	..	5 9	
343	Campbell, G. E. W. B.	Storeman	..	2	0 10 0 „	5 9	..	5 9	
344	Peters, F. W. J.	Guard	..	2	0 10 0 „	5 9	..	5 9	
345	Walker, R.	Shunter	..	2	0 10 0 „	5 9	..	5 9	

RAILWAY DEPARTMENT CLASSIFICATION, 1913—*continued.*

SECOND DIVISION—*continued.*

Class 1: Traffic and Stores—continued.

Prog. No.	Name.	Classification.				Service			Remarks.
		Designation	Subclass.	Grade.	Rate of Pay.	Since last appointed.	Prior to Date last appointed.	For Superannuation Purposes.	
					£ s. d.	Y. M.	Y. M.	Y. M.	
346	Mackay, J. W.	Storeman	..	2	0 10 0 per diem	5 9	2 7	8 4	
347	Marshall, H. F.	Shunter	..	2	0 10 0 „	5 8	..	5 8	
348	Lawton, H. E.	„	..	2	0 10 0 „	5 8	..	5 8	
349	Ryan, T.	„	..	2	0 10 0 „	5 8	..	5 8	
350	Robertson, A.	„	..	2	0 10 0 „	5 8	..	5 8	
351	Hassett, D.	Guard	..	2	0 10 0 „	5 8	..	5 8	
352	Standen, A. O.	„	..	2	0 10 0 „	5 8	..	5 8	
353	Cruickshank, J. E.	Shunter	..	2	0 10 0 „	5 8	..	5 8	
354	Johnston, F. C.	„	..	2	0 10 0 „	5 7	..	5 7	
355	Murray, G. A.	„	..	2	0 10 0 „	5 7	..	5 7	
356	Pressly, G. M.	Storeman	..	2	0 10 0 „	5 7	..	5 7	
357	McLachlan, H. A.	Shunter	..	2	0 10 0 „	5 7	..	5 7	
358	Johnson, W.	„	..	2	0 10 0 „	5 7	0 7	6 2	
359	Johnston, W. J.	„	..	2	0 10 0 „	5 7	4 4	5 7	
360	Stone, F.	„	..	2	0 10 0 „	5 6	..	5 6	
361	Mackay, S.	Guard	..	2	0 10 0 „	5 6	..	5 6	
362	Watts, A. H.	Storeman	..	2	0 10 0 „	5 6	..	5 6	
363	Black, F. F.	Guard	..	2	0 10 0 „	5 6	0 2	5 8	
364	Taylor, A.	Shunter	..	2	0 10 0 „	5 6	..	5 6	
365	Maike, A. P.	„	..	2	0 10 0 „	5 6	..	5 6	
366	Rush, W.	Guard	..	2	0 10 0 „	5 5	..	5 5	
367	Galbraith, A.	„	..	2	0 10 0 „	5 5	..	5 5	
368	Hancock, T.	„	..	2	0 10 0 „	5 5	..	5 5	
369	Taylor, H. N.	Signalman	..	2	0 10 0 „	5 5	..	5 5	
370	Haywood, H. M.	„	..	2	0 10 0 „	5 5	..	5 5	
371	Irving, J. F.	Storeman	..	2	0 10 0 „	5 5	..	5 5	
372	McCartney, J. F.	Signalman	..	2	0 10 0 „	5 5	..	5 5	
373	Wallace, W. A.	Shunter	..	2	0 10 0 „	5 5	0 3	5 8	
374	Wood, A. W. J.	Storeman	..	2	0 9 6 „	23 5	..	23 5	
375	Ross, A. R.	Guard	..	2	0 9 6 „	11 7	1 11	13 6	
376	Campbell, J. P.	Shunter	..	2	0 9 6 „	7 4	1 4	7 5	
377	McIlhone, J. A.	Guard	..	2	0 9 6 „	6 10	..	6 10	
378	Ferguson, A.	Shunter	..	2	0 9 6 „	6 5	0 9	7 2	
379	McEvoy, G. E.	„	..	2	0 9 6 „	6 4	0 1	6 5	
380	Morrison, R.	Guard	..	2	0 9 6 „	6 3	..	6 3	
381	Berry, J.	Shunter	..	2	0 9 6 „	6 1	1 3	7 2	
382	Hornung, H.	„	..	2	0 9 6 „	6 0	..	6 0	
383	Colthurst, G. J	Guard	..	2	0 9 6 „	5 11	..	5 11	
384	Edwards, C. A.	Storeman	..	2	0 9 6 „	10 7	1 2	11 9	
385	Carroll, J.	„	..	2	0 9 6 „	4 4	16 11	21 3	
386	Cleine, W. C.	„	..	2	0 9 6 „	11 5	0 3	11 8	
387	Simpson, W. J.	Signalman	..	2	0 9 6 „	5 5	..	5 5	
388	O'Sullivan, C.	Guard	..	2	0 9 6 „	5 5	..	5 5	
389	Johnston, A.	„	..	2	0 9 6 „	5 4	..	5 4	
390	Paul, B. W.	Shunter	..	2	0 9 6 „	5 4	..	5 4	
391	Morrison, J. H. M.	„	..	2	0 9 6 „	5 4	..	5 4	
392	Elliott, R.	„	..	2	0 9 6 „	5 4	..	5 4	
393	Turner, A. L.	Guard	..	2	0 9 6 „	5 4	..	5 4	
394	Black, C. B.	Shunter	..	2	0 9 6 „	5 4	..	5 4	
395	Garaway, F. D.	„	..	2	0 9 6 „	5 4	..	5 4	
396	Kerr, R. W.	„	..	2	0 9 6 „	5 4	..	5 4	
397	Kennedy, J.	„	..	2	0 9 6 „	5 4	..	5 4	
398	Bain, J.	Signalman	..	2	0 9 6 „	5 3	0 1	5 4	
399	McIntosh, H. J.	Storeman	..	2	0 9 6 „	5 5	3 3	8 8	
400	Simpson, A. W.	„	..	2	0 9 6 „	5 4	0 10	6 2	
401	Ashby, J. H.	Shunter	..	2	0 9 6 „	5 3	..	5 3	
402	Nuttall, A.	Guard	..	2	0 9 6 „	5 3	..	5 3	
403	Frost, G. M.	„	..	2	0 9 6 „	5 3	..	5 3	
404	Murray, G.	Signalman	..	2	0 9 6 „	5 3	..	5 3	
405	Hampton, R.	Shunter	..	2	0 9 6 „	5 3	0 1	5 4	
406	Shann, G. G.	„	..	2	0 9 6 „	5 2	..	5 2	
407	Cameron, J.	Guard (Wanganui)	..	2	0 9 6 „	5 2	..	5 2	
408	Price, A. W. A.	Shunter	..	2	0 9 6 „	5 2	..	5 2	
409	Niall, D. C.	„	..	2	0 9 6 „	5 2	4 0	9 2	
410	Malcolm, J. J.	„	..	2	0 9 6 „	5 2	..	5 2	
411	Old, C. W.	„	..	2	0 9 6 „	5 2	..	5 2	
412	Stewart, A.	„	..	2	0 9 6 „	5 2	..	5 2	
413	Chapman, J. W.	„	..	2	0 9 6 „	5 2	..	5 2	
414	Darroch, D.	Guard	..	2	0 9 6 „	5 1	..	5 1	
415	Leach, I.	Shunter	..	2	0 9 6 „	5 1	..	5 1	
416	Harding, P.	Signalman	..	2	0 9 6 „	5 1	..	5 1	
417	McInnes, D. C. M.	Shunter	..	2	0 9 6 „	5 1	..	5 1	
418	Edwards, T.	„	..	2	0 9 6 „	5 1	..	5 1	
419	Foley, T.	„	..	2	0 9 6 „	5 1	..	5 1	
420	Eden, A. E.	„	..	2	0 9 6 „	5 1	..	5 1	
421	Devling, D.	„	..	2	0 9 6 „	5 1	0 1	5 2	
422	Foster, R.	„	..	2	0 9 6 „	5 1	..	5 1	

RAILWAY DEPARTMENT CLASSIFICATION, 1913—*continued*.

SECOND DIVISION—*continued*.

Class 1: Traffic and Stores—continued.

Prog. No.	Name.	Classification.				Service			Remarks.
		Designation.	Subclass.	Grade.	Rate of Pay.	Since last appointed.	Prior to Date last appointed.	For Superannuation Purposes.	
					£ s. d.	Y. M.	Y. M.	Y. M.	
423	O'Loughlin, H. B.	Shunter		2	0 9 6 per diem	5 1	..	5 1	
424	Jones, W. R. J.	„		2	0 9 6 „	5 1	..	5 1	
425	Seguin, W. J.	Guard		2	0 9 6 „	5 0	13 3	5 0	
426	Doyle, G.	Shunter		2	0 9 6 „	5 0	..	5 0	
427	Darling, W. M.	„		2	0 9 6 „	9 11	..	9 11	
428	Dunham, C. G.	„		2	0 9 6 „	9 10	..	9 10	
429	O'Keefe, T.	„		2	0 9 6 „	6 11	..	6 11	
430	Collecutt, F. C.	Signalman		2	0 9 6 „	8 2	..	8 2	
431	Thompson, C. C.	„		2	0 9 6 „	9 10	..	9 10	
432	Pepper, J.	Shunter		2	0 9 6 „	9 9	..	9 9	
433	Anderson, G. T.	„		2	0 9 6 „	10 11	..	10 11	
434	Duncan, G.	„		2	0 9 6 „	10 1	..	10 1	
435	Wright, L. W.	„		2	0 9 6 „	9 8	..	9 8	
436	Troon, W. E.	„		2	0 9 6 „	9 8	..	9 8	
437	Newton, G.	„		2	0 9 6 „	9 8	..	9 8	
438	Connell, E.	„		2	0 9 6 „	9 7	..	9 7	
439	Purcell, A. E.	Guard		2	0 9 6 „	9 7	..	9 7	
440	Cole, J.	Shunter		2	0 9 6 „	9 7	0 2	9 9	
441	Balneaves, C.	„		2	0 9 6 „	9 7	..	9 7	
442	Steel, T. E.	„		2	0 9 6 „	9 6	..	9 8	
443	Smith, J. R.	„		2	0 9 6 „	9 5	..	9 5	
444	Latta, H. A.	Signalman		2	0 9 6 „	5 4	..	5 4	
445	Carty, J. D.	„		2	0 9 6 „	5 3	..	5 3	
446	Muncaster, F. W.	Storeman		2	0 9 6 „	5 2	..	5 2	
447	Rae, W. H.	„		2	0 9 6 „	5 2	..	5 2	
448	Walker, T. A.	„		2	0 9 6 „	5 2	3 4	5 2	
449	Powe, T. E.	„ (Stores)		2	0 9 6 „	5 1	..	5 1	
450	Hayward, D. A.	„		2	0 9 6 „	9 7	..	9 7	
451	Garaway, C. G.	„		2	0 9 6 „	9 5	..	9 5	
452	Schumacher, R.	Shunter		2	0 9 6 „	9 4	..	9 4	
453	Mutton, G. J.	„		2	0 9 6 „	9 4	1 6	10 10	
454	Beals, T. H.	„		2	0 9 6 „	9 4	..	9 4	
455	Webster, T. D.	„		2	0 9 6 „	9 9	..	9 9	
456	Sloan, J. M.	„		2	0 9 6 „	9 4	..	9 4	
457	Walters, C.	„		2	0 9 6 „	9 4	..	9 4	
458	Lyall, W.	„		2	0 9 6 „	9 4	..	9 4	
459	Shingleton, E. N. H.	„		2	0 9 6 „	9 3	..	9 3	
460	Robertson, A. G.	„		2	0 9 6 „	9 3	..	9 3	
461	Hickey, P.	„		2	0 9 6 „	9 2	..	9 2	
462	Morrison, J.	„		2	0 9 6 „	9 2	..	9 2	
463	Aitken, J.	„		2	0 9 6 „	9 2	..	9 2	
464	Robertson, F.	„		2	0 9 6 „	9 1	0 1	9 2	
465	Gourlay, J. R.	„		2	0 9 6 „	9 1	..	9 1	
466	Smith, S.	„		2	0 9 6 „	9 1	0 2	9 3	
467	Loader, J.	„ (Auckland)		2	0 9 6 „	9 1	..	9 1	
468	French, J.	Storeman		2	0 9 6 „	9 1	..	9 1	
469	McKay, C. D.	Shunter		2	0 9 6 „	9 1	..	9 1	
470	Tunbridge, E. A.	„		2	0 9 6 „	9 1	..	9 1	
471	Matheson, P.	Signalman		2	0 9 6 „	7 8	..	7 8	
472	Blair, N. H.	„		2	0 9 6 „	6 10	..	6 10	
473	Huggins, H. R. J.	Shunter		2	0 9 6 „	6 9	..	6 9	
474	Dry, J. D.	Signalman		2	0 9 6 „	6 8	..	6 9	
475	Clarke, T.	Shunter		2	0 9 6 „	6 7	..	6 7	
476	Hagan, W. G.	Storeman		2	0 9 6 „	9 0	..	9 0	
477	Ellen, W. V.	„		2	0 9 6 „	5 0	..	5 0	
478	Grace, M.	„		2	0 9 6 „	5 0	..	5 0	
479	Mayall, J. E.	„		2	0 9 6 „	4 11	..	4 11	
480	Comerford, F. W.	„		2	0 9 6 „	4 11	..	4 11	
481	Myers, W.	Shunter		2	0 9 6	4 11	..	4 11	
482	Cunningham, A. J.	„		2	0 9 6 „	4 11	0 10	5 9	
483	Condon, J. T.	„		2	0 9 6 „	4 11	0 1	4 11	
484	Russell, R. G.	Signalman		2	0 9 6 „	4 11	0 4	5 3	
485	Hare, F.	Storeman		2	0 9 6 „	4 11	0 3	5 2	
486	Jeffery, R.	„		2	0 9 6 „	4 11	..	4 11	
487	McGlynn, W. P.	„		2	0 9 6 „	4 11	..	4 11	
488	Seed, H.	„		2	0 9 6 „	4 10	..	4 10	
489	Walker, W. H.	Shunter		2	0 9 6 „	4 10	..	4 10	
490	Ransley, C.	Storeman		2	0 9 6 „	4 10	..	4 10	
491	Blackie, D.	Shunter		2	0 9 6 „	4 10	..	4 10	
492	Watson, F. E.	Signalman		2	0 9 6 „	4 10	0 3	5 1	
493	Smith, W. T.	„		2	0 9 6 „	4 10	..	4 10	
494	Fisher, W.	Shunter		2	0 9 6 „	4 10	..	4 10	
495	McNish, J. R.	Signalman		2	0 9 6	4 10	0 3	5 1	
496	Adams, H.	„		2	0 9 6 „	4 10	..	4 10	
497	Moyes, A.	Storeman		2	0 9 6 „	4 10	0 3	5 1	
498	Prince, W. T.	Shunter		2	0 9 6 „	4 10	0 3	5 1	
499	Bonniface, H. E.	„		2	0 9 6 „	4 10	0 1	4 11	
500	Gladstone, A.	„		2	0 9 6 „	4 10	0 3	5 1	

RAILWAY DEPARTMENT CLASSIFICATION, 1913—*continued.*

SECOND DIVISION—*continued.*

Class 1: Traffic and Stores—continued.

Prog. No.	Name.	Classification.				Service			Remarks
		Designation.	Subclass.	Grade.	Rate of Pay.	Since last appointed.	Prior to Date last appointed.	For Superannuation Purposes.	
					£ s. d.	Y. M.	Y. M.	Y. M.	
501	McMullen, H.	Storeman	..	2	0 9 6 per diem	4 10	0 2	5 0	
502	Ruddy, H.	Shunter	..	2	0 9 6 „	4 10	2 2	4 10	
503	Monro, W.	Storeman	..	2	0 9 6 „	4 10	0 3	5 1	
504	Mann, H.	Signalman	..	2	0 9 6 „	4 9	..	4 9	
505	Murdock, J. D. C.	„	..	2	0 9 6 „	4 9	..	4 9	
506	O'Sullivan, W. T.	Shunter	..	2	0 9 6 „	4 9	0 1	4 10	
507	Gibson, M. H.	„	..	2	0 9 6 „	4 9	1 6	5 0	
508	Howe, H. V.	Storeman (Stores)	..	2	0 9 6 „	4 9	0 4	5 1	
509	Kilkenny, M. H.	Shunter	..	2	0 9 6 „	4 8	..	4 8	
510	Godfrey, J. A.	„	..	2	0 9 6 „	4 8	..	4 8	
511	Harrison, A. W. J.	„	..	2	0 9 6 „	4 8	..	4 8	
512	Hallins, W. F.	Signalman	..	2	0 9 6 „	4 8	..	4 8	
513	Miller, H.	„	..	2	0 9 6 „	4 8	0 5	5 1	
1	Ingham, J.	Porter	..	..	0 9 0 „	14 6	0 9	15 3	
2	Lay, J. C.	„	..	..	0 9 0 „	8 2	0 10	9 0	
3	Petty, R.	„	..	..	0 9 0 „	12 6	2 6	13 5	
4	Coote, W.	„	..	..	0 9 0 „	21 1	..	21 1	
5	Gardner, W.	„	..	..	0 9 0 „	10 10	..	10 10	
6	Dreaver, R.	„	..	..	0 9 0 „	5 9	..	5 9	
7	Bell, F. W.	„	..	..	0 9 0 „	7 0	..	7 0	
8	Lee, R. H.	„	..	..	0 9 0 „	21 0	..	21 0	
9	Jeffery, L.	„	..	..	0 9 0 „	7 1	..	7 1	
10	Andrews, W. H.	„	..	..	0 9 0 „	10 3	0 3	10 7	
11	Weir, A.	„	..	..	0 9 0 „	18 1	16 0	18 1	
12	Rooks, J.	„	..	..	0 9 0 „	16 8	..	16 8	
13	Hughes, T.	„	..	..	0 9 0 „	15 8	0 11	15 8	
14	Herdman, C.	„	..	..	0 9 0 „	15 2	..	15 2	
15	McKay, C.	„	..	..	0 9 0 „	14 5	0 4	14 7	
16	Lewis, T.	„	..	..	0 9 0 „	31 4	..	31 4	
17	Hobbs, J.	„	..	..	0 9 0 „	26 5	..	26 5	
18	Butland, J.	„	..	..	0 9 0 „	31 2	..	31 2	
19	Mulloy, H. J.	„	..	..	0 9 0 „	11 4	..	11 4	
20	Burke, M.	„	..	..	0 9 0 „	23 5	..	23 5	
21	Huddlestone, R. J.	„	..	..	0 9 0 „	22 4	2 10	25 2	
22	Gibson, J.	„	..	..	0 9 0 „	20 1	4 5	20 1	
23	Tomlinson, H. I.	„	..	..	0 9 0 „	13 5	..	13 5	
24	Farrington, W. E.	„	..	..	0 9 0 „	8 3	0 5	8 8	
25	Payne, H.	„	..	..	0 9 0 „	30 11	..	30 11	
26	McLeary, J.	„	..	..	0 9 0 „	15 7	0 1	15 8	
27	Kerrigan, M.	„	..	..	0 9 0 „	4 4	22 7	26 11	
28	Hughes, S.	„	..	..	0 9 0 „	18 0	1 11	19 11	
29	Troy, T.	„	..	..	0 9 0 „	33 1	..	33 1	
30	Bourke, D.	„	..	..	0 9 0 „	31 10	..	31 10	
31	Burrows, G. D.	„	..	..	0 9 0 „	31 3	..	31 3	
32	Hudson, G. F.	„	..	..	0 9 0 „	11 11	0 9	12 8	
33	McDonald, T. B.	„	..	..	0 9 0 „	27 8	..	27 8	
34	Jenkins, J. D.	„	..	..	0 9 0 „	10 6	..	10 6	
35	Head, L.	„	..	..	0 9 0 „	34 2	..	34 2	
36	Lean, J.	„	..	..	0 9 0 „	30 0	..	30 0	
37	Kelly, J.	„	..	..	0 9 0 „	24 7	1 1	25 8	
38	Hogan, D.	„	..	..	0 9 0 „	27 7	..	27 7	
39	Murphy, Cornelius	„	..	..	0 9 0 „	13 7	0 2	13 9	
40	Hendren, M.	„	..	..	0 9 0 „	26 1	..	26 1	
41	Dennis, H. E.	„	..	..	0 9 0 „	30 10	..	30 10	
42	Masters, H.	„	..	..	0 9 0 „	29 11	..	29 11	
43	Campbell, A.	„	..	..	0 9 0 „	30 10	..	30 10	
44	Maddock, J.	„	..	..	0 9 0 „	24 6	3 3	27 9	
45	Prince, G.	„	..	..	0 9 0 „	28 5	..	28 5	
46	O'Keefe, J.	„	..	..	0 9 0 „	23 7	..	23 7	
47	Hogan, J.	„	..	..	0 9 0 „	17 10	..	..	
48	Maley, M.	„	..	..	0 9 0 „	22 10	..	22 10	
49	Morrison, W.	„	..	..	0 9 0 „	32 1	..	32 1	
50	Grace, J. L.	„	..	..	0 9 0 „	18 3	..	18 3	
51	Shanahan, W.	„	..	..	0 9 0 „	26 0	..	26 0	
52	Dennehy, M.	„	..	..	0 9 0 „	29 5	..	29 5	
53	Papesch, N.	„	..	..	0 9 0 „	28 5	..	28 5	
54	Mooney, W.	„	..	..	0 9 0 „	35 3	..	35 3	
55	Winter, W. H.	„	..	..	0 9 0 „	20 8	..	20 8	
56	Woods, W. J.	„	..	..	0 9 0 „	24 4	..	24 4	
57	Demouth, H.	„	..	..	0 9 0 „	21 10	0 1	21 11	
58	Leighton, W. H.	„	..	..	0 9 0 „	27 8	..	27 8	
59	Wilson, W.	„	..	..	0 9 0 „	29 6	0 8	30 2	
60	Clark, T. F.	„	..	..	0 9 0 „	28 9	0 5	28 9	
61	Brakenridge, G. T.	„	..	..	0 9 0 „	27 10	..	27 10	
62	Scott, J. C.	„	..	..	0 9 0 „	28 4	..	28 4	

Railway Department Classification, 1913—*continued.*

SECOND DIVISION—*continued.*

Class 1: Traffic and Stores—continued.

Prog. No.	Name.	Classification. Designation.	Subclass.	Grade.	Rate of Pay	Service Since last appointed.	Service Prior to Date last appointed.	Service For Superannuation Purposes.	Remarks.
					£ s. d.	Y. M.	Y. M.	Y. M.	
63	Paterson, A. M., sen.	Porter	..	..	0 9 0 per diem	29 2	..	29 2	
64	Tate, W. A.	„	..	..	0 9 0 „	23 6	..	23 6	
65	Reeve, E.	„	..	..	0 9 0 „	36 6	..	36 6	
66	Fletcher, H.	„	..	..	0 9 0 „	32 11	..	32 11	
67	Neels, S. J.	„	..	..	0 9 0 „	30 0	..	30 0	
68	Mansell, A. J.	„	..	..	0 9 0 „	35 2	..	35 2	
69	Alecock, J. C.	„	..	..	0 9 0 „	30 11	..	30 11	
70	Morse, A.	„	..	..	0 9 0 „	24 10	4 5	29 2	
71	Reid, A. G.	„	..	..	0 9 0 „	26 0	..	26 0	
72	Liddle, E.	„	..	..	0 9 0 „	21 4	2 1	21 4	
73	Molloy, P.	„	..	..	0 9 0 „	37 3	..	37 3	
74	Dunwoodie, R.	„	..	..	0 9 0 „	29 5	..	29 5	
75	Lattimer, J.	„	..	..	0 9 0 „	22 7	..	22 7	
76	Halley, W. H.	„	..	..	0 9 0 „	22 8	3 6	22 8	
77	Rayson, O. J.	„	..	..	0 9 0 „	23 7	..	23 7	
78	Gordon, S. D.	„	..	..	0 9 0 „	12 9	2 0	13 11	
79	Morgan, W.	„	..	..	0 9 0 „	12 3	..	12 3	
80	Campbell, J. G.	„	..	..	0 9 0 „	15 1	..	15 1	
81	Stimpson, C. S.	„	..	..	0 9 0 „	14 10	..	14 10	
82	Naylor, S.	„	..	..	0 9 0 „	13 11	0 8	14 0	
83	Ball, G. A.	„	..	..	0 9 0 „	22 10	0 3	23 1	
84	Maloney, M.	„	..	..	0 9 0 „	13 10	..	13 10	
85	Henry, H. L.	„	..	..	0 9 0 „	12 5	..	12 5	
86	Keys, E. I.	„	..	..	0 9 0 „	9 8	3 0	12 8	
87	Croad, T. E. L.	„	..	..	0 9 0 „	11 11	1 4	13 1	
88	Rea, R.	„	..	..	0 9 0 „	9 7	0 2	9 9	
89	Best, G. C.	„	..	..	0 9 0 „	8 9	..	8 9	
90	Castle, A.	„	..	..	0 9 0 „	8 7	..	8 7	
91	Henderson, G. R.	„	..	..	0 9 0 „	12 1	..	12 1	
92	Orbell, J.	„	..	..	0 9 0 „	34 7	..	34 7	
93	Hughson, C. A. D.	„	..	..	0 9 0 „	19 10	1 1	20 11	
94	Lowen, J. E.	„	..	..	0 9 0 „	24 5	..	24 5	
95	Kruskopf, S.	„	..	..	0 9 0 „	14 9	0 9	15 1	
96	Smith, J.	„	..	..	0 9 0 „	14 8	..	14 8	
97	Kay, R.	„	..	..	0 9 0 „	14 4	0 4	14 8	
98	Biggs, A. E.	„	..	..	0 9 0 „	16 7	..	16 7	
99	Coomber, W. T.	„	..	..	0 9 0 „	12 10	0 7	13 5	
100	Burman, C.	„	..	..	0 9 0 „	12 6	..	12 6	
101	Joyce, S.	„	..	..	0 9 0 „	12 5	0 5	12 10	
102	Butts, A. G. H.	„	..	..	0 9 0 „	12 5	..	12 5	
103	Petersen, J. L.	„	..	..	0 9 0 „	12 5	0 2	12 7	
104	Goodman, F. E.	„	..	..	0 9 0 „	12 4	..	12 4	
105	Ash, J.	„	..	..	0 9 0 „	12 2	0 6	12 8	
106	Duffin, J. L.	„	..	..	0 9 0 „	16 4	..	16 4	
107	Mullaney, J.	„	..	..	0 9 0 „	11 6	0 5	11 6	
108	McKendry, P.	„	..	..	0 9 0 „	11 5	4 0	15 3	
109	Brown, T.	„	..	..	0 9 0 „	11 0	1 5	12 5	
110	Knight, D.	„	..	..	0 9 0 „	10 11	0 10	10 11	
111	Dewe, E.	„	..	..	0 9 0 „	10 11	1 2	11 6	
112	Goddard, W.	„	..	..	0 9 0 „	10 10	1 4	11 9	
113	Henley, M.	„	..	..	0 9 0 „	10 8	0 3	10 11	
114	Condon, J.	„	..	..	0 9 0 „	10 6	0 3	10 9	
115	Sullivan, P. J.	„	..	..	0 9 0 „	9 6	1 2	10 7	
116	Peters, J. P.	„	..	..	0 9 0 „	9 4	1 6	10 6	
117	Smith, R. W. G	„	..	..	0 9 0 „	9 4	0 4	9 6	
118	Ouston, W. E.	„	..	..	0 9 0 „	9 3	1 2	10 5	
119	McBride, A. M.	„	..	..	0 9 0 „	9 3	1 3	10 6	
120	Rosoman, J. E.	„	..	..	0 9 0 „	9 3	3 11	11 6	
121	Brailey, W. J.	„	..	..	0 9 0 „	8 11	0 2	9 1	
122	Mackie, C. J.	„	..	..	0 9 0 „	8 9	0 5	9 2	
123	Hart, E. G. L.	„	..	..	0 9 0 „	8 7	0 4	8 11	
124	Doel, B. C.	„	..	..	0 9 0 „	8 7	0 11	8 9	
125	Annabell, G.	„	..	..	0 9 0 „	8 6	..	8 6	
126	Lawrence, R.	„	..	..	0 9 0 „	8 5	0 6	8 11	
127	Gibson, R.	„	..	..	0 9 0 „	8 1	1 0	9 1	
128	Higgins, H. C.	„	..	..	0 9 0 „	7 11	0 3	8 2	
129	Bidstrup, A.	„	..	..	0 9 0 „	7 6	..	7 6	
130	Paterson, D.	„	..	..	0 9 0 „	7 2	0 5	7 7	
131	Wickham, R.	„	..	..	0 9 0 „	7 2	..	7 2	
132	Walls, J. A.	„	..	..	0 9 0 „	11 0	..	11 0	
133	August, W. O.	„	..	..	0 9 0 „	13 8	..	13 8	
134	Reidy, P.	„	..	..	0 9 0 „	11 2	..	11 2	
135	Holmes, W. H.	„	..	..	0 9 0 „	6 11	1 2	7 3	
136	Hunt, H.	„	..	..	0 9 0 „	6 11	0 4	7 0	
137	Gittos, E.	„	..	..	0 9 0 „	6 10	..	6 10	
138	Bean, H. E.	„	..	..	0 9 0 „	6 10	..	6 10	

RAILWAY DEPARTMENT CLASSIFICATION, 1913—*continued.*

Prog. No.	Name.	Classification.				Service			Remarks.
		Designation.	Subclass.	Grade.	Rate of Pay	Since last appointed.	Prior to Date last appointed.	For Superannuation Purposes.	
					SECOND DIVISION—*continued.* *Class 1: Traffic and Stores*—continued.				
					£ s. d.	Y. M.	Y. M.	Y. M.	
139	Conder, H. J.	Porter	..	..	0 9 0 per diem	6 9	0 2	6 11	
140	Wyatt, A. E.	„	..	..	0 9 0 „	6 7	..	6 7	
141	Kingdon, A. H.	„	..	..	0 9 0 „	6 6	0 9	7 3	
142	Mulford, A. J.	„	..	..	0 9 0 „	6 6	0 5	6 9	
143	Swanson, G.	„	..	..	0 9 0 „	6 4	..	9 4	
144	Morton, A.	„	..	..	0 9 0 „	6 4	..	6 4	
145	Dunning, N. E. M.	„	..	..	0 9 0 „	6 4	..	6 4	
146	Bain, A.	„	..	..	0 9 0 „	6 3	0 2	6 4	
147	Dixon, C. H.	„	..	..	0 9 0 „	6 3	..	6 3	
148	McArthur, W.	„	..	..	0 9 0 „	6 3	..	6 3	
149	O'Flaherty, M. C.	„	..	..	0 9 0 „	4 4	1 11	6 3	
150	Thorne, S. G.	„	..	..	0 9 0 „	6 2	0 3	6 4	
151	Murphy, J.	„	..	..	0 9 0 „	6 1	..	6 1	
152	Swift, H. W.	„	..	..	0 9 0 „	10 10	..	10 10	
153	McKenna, A. O.	„	..	..	0 9 0 „	11 0	..	11 0	
154	Carrell, J. A.	„	..	..	0 9 0 „	10 0	..	10 0	
155	Morgan, C. W.	„	..	..	0 9 0 „	6 0	6 1	12 1	
156	Scelly, H. J.	Labourer (Stores)	..	..	0 9 0 „	6 0	6 11	12 11	
157	Wilson, R.	Porter	..	..	0 9 0 „	5 9	..	5 9	
158	Mount, J. H.	„	..	..	0 9 0 „	5 8	..	5 8	
159	Brosnahan, T.	„	..	..	0 9 0 „	5 8	..	5 8	
160	Robert, W. B.	„	..	..	0 9 0 „	5 7	..	5 7	
161	Evans, E. G.	„	..	..	0 9 0 „	5 6	..	5 6	
162	Bailey, J. E.	„	..	..	0 9 0 „	5 5	..	5 5	
163	Graham, T.	„	..	..	0 9 0 „	5 5	1 11	7 4	
164	O'Brien, P. J.	„	..	..	0 9 0 „	5 4	..	5 4	
165	Falconar, A. F.	„	..	..	0 9 0 „	5 4	..	5 4	
166	Williamson, F.	„	..	..	0 9 0 „	5 4	..	5 4	
167	Storey, C. F.	„	..	..	0 9 0 „	5 3	..	5 3	
168	Smith, R.	„	..	..	0 9 0 „	5 3	2 6	7 9	
169	Robertson, T. J.	„	..	..	0 9 0 „	5 2	2 9	5 2	
170	Berry, T.	„	..	..	0 9 0 „	5 2	..	5 2	
171	Gray, F.	„	..	..	0 9 0 „	5 2	..	5 2	
172	Biel, A.	„	..	..	0 9 0 „	5 1	..	5 1	
173	Hungerford, H. S.	„	..	..	0 9 0 „	5 1	..	5 1	
174	Cronin, T.	„	..	..	0 9 0 „	5 1	..	5 1	
175	Amos, J. P.	„	..	..	0 9 0 „	5 1	..	5 1	
176	Robson, H.	„	..	..	0 9 0 „	5 0	0 4	5 4	
177	Jones, E.	„	..	..	0 9 0 „	5 0	0 2	5 2	
178	Plato, J. M.	„	..	..	0 9 0 „	5 0	5 5	10 5	
179	Clarke, E. J.	„	..	..	0 9 0 „	9 9	..	9 9	
180	Rawlings, W. E.	„	..	..	0 9 0 „	9 7	..	9 7	
181	Atkins, C. V.	„	..	..	0 9 0 „	9 6	..	9 6	
182	Giles, T. W.	„	..	..	0 9 0 „	9 4	0 3	9 7	
183	Dawson, F. W.	„	..	..	0 9 0 „	9 4	..	9 4	
184	Stark, T. J.	„	..	..	0 9 0 „	9 0	..	9 0	
185	Bradbury, G. N.	„	..	..	0 9 0 „	9 0	..	9 0	
186	Poutawera, K. M.	„	..	..	0 9 0 „	5 0	0 3	5 3	
187	Balsom, A. H.	„	..	..	0 9 0 „	5 0	0 1	5 1	
188	Ozanne, F. L. R.	„	..	..	0 9 0 „	4 11	..	4 11	
189	Gledhill, W. E.	Labourer (Stores)	..	..	0 9 0 „	4 11	0 1	5 0	
190	Hutchison, A.	Porter	..	..	0 9 0 „	4 11	..	4 11	
191	Keen, S. H.	„	..	..	0 9 0 „	4 10	..	4 10	
192	Benjes, G. E.	„	..	..	0 9 0 „	4 10	..	4 10	
193	Buckingham, F. G.	„	..	..	0 9 0 „	4 9	0 3	5 0	
194	Taylor, W. B.	„	..	..	0 9 0 „	4 9	0 2	4 11	
195	Brooks, W. L.	„	..	..	0 9 0 „	4 9	..	4 9	
196	Campbell, G. C.	„	..	..	0 9 0 „	4 8	..	4 8	
197	Gimblett, F. S.	„	..	..	0 9 0 „	4 8	..	4 8	
198	Homer, C. W.	„	..	..	0 9 0 „	4 8	.	4 8	
199	Helm, F.	„	..	..	0 9 0 „	4 8	..	4 8	
200	Riggs, A. J. S.	„	..	..	0 9 0 „	4 8	0 2	4 10	
201	Brown, R. J.	„	..	..	0 9 0 „	4 8	..	4 8	
202	Imbs, C. A.	„	..	..	0 9 0 „	4 8	0 4	5 0	
203	Donohue, T. F.	„	..	..	0 9 0 „	4 7	..	4 7	
204	Foubister, W.	„	..	..	0 9 0 „	4 7	0 7	5 2	
205	Crawford, W.	„	..	..	0 9 0 „	4 7	..	4 7	
206	Connors, J.	„	..	..	0 9 0 „	4 7	0 7	5 2	
207	Holland, C. H.	„	..	..	0 9 0 „	4 7	0 3	4 10	
208	Martin, E. G.	„	..	..	0 9 0 „	4 7	0 3	4 10	
209	Brown, H.	„	..	..	0 9 0 „	4 7	0 4	4 11	
210	Curtz, H. W.	„	..	..	0 9 0 „	4 7	..	4 7	
211	Latto, J.	„	..	..	0 9 0 „	4 7	..	4 7	
212	Taylor, H. E.	„	..	..	0 9 0 „	4 7	0 5	5 0	
213	Green, O. O.	„	..	..	0 9 0 „	4 7	0 5	5 0	
214	Cane, L. C.	„	..	..	0 9 0 „	4 7	0 2	4 9	

RAILWAY DEPARTMENT CLASSIFICATION, 1913—*continued.*

SECOND DIVISION—*continued.*

Class 1: Traffic and Stores—continued.

Prog. No.	Name.	Classification.				Service			Remarks.
		Designation.	Subclass.	Grade.	Rate of Pay	Since last appointed.	Prior to Date last appointed.	For Superannuation Purposes.	
					£ s. d.	Y. M.	Y. M.	Y. M.	
215	Currie, W.	Porter	..	..	0 9 0 per diem	4 7	0 3	4 10	
216	Hayes, M.	„	..	..	0 9 0 „	4 7	0 2	4 9	
217	Greaney, T.	„	..	..	0 9 0 „	4 7	..	4 7	
218	Turnbull, C. W.	„	..	..	0 9 0 „	4 6	..	4 6	
219	Thrupp, J.	„	..	..	0 9 0 „	4 7	0 6	4 11	
220	Bohringer, G. F.	„	..	..	0 9 0 „	4 6	..	4 6	
221	Boyd, A. H.	Labourer (Stores)	..	..	0 9 0 „	4 6	0 2	4 8	
222	Finnerty, J. P.	Porter	..	..	0 9 0 „	4 6	..	4 6	
223	Leadbetter, B. J.	„	..	..	0 9 0 „	4 6	0 7	5 1	
224	Simpson, J.	„	..	..	0 9 0 „	4 6	..	4 6	
225	O'Neill, E. F.	„	..	..	0 9 0 „	4 6	..	4 6	
226	McGovern, W. J.	„	..	..	0 9 0 „	4 6	..	4 6	
227	Joughin, A. J.	„	..	..	0 9 0 „	4 6	..	4 6	
228	Ridler, T.	„	..	..	0 9 0 „	4 6	0 1	4 7	
229	Dovalosky, J.	„	..	..	0 9 0 „	4 5	1 0	4 5	
230	Simmons, R. G. E.	„	..	..	0 9 0 „	4 5	..	4 5	
231	Smith, L. S.	„	..	..	0 9 0 „	4 5	..	4 5	
232	Brennan, W. G.	„	..	..	0 9 0 „	4 5	..	4 5	
233	Lightfoot, T. W.	„	..	..	0 9 0 „	4 5	0 5	4 10	
234	Bryson, A.	„	..	..	0 9 0 „	4 5	0 2	4 7	
235	Mildenhall, F. A.	„	..	..	0 9 0 „	4 5	0 2	4 7	
236	Christiansen, O. M.	„	..	..	0 9 0 „	4 5	0 1	4 6	
237	Nicholls, W. C.	„	..	..	0 9 0 „	4 5	..	4 5	
238	Jackson, J. G.	„	..	..	0 9 0 „	4 5	..	4 5	
239	Stevens, R. B.	„	..	..	0 9 0 „	4 5	..	4 5	
240	Hall, D.	„	..	..	0 9 0 „	4 5	..	4 5	
241	Aukett, C. H.	„	..	..	0 9 0 „	4 5	..	4 5	
242	Hagan, J. E.	„	..	..	0 9 0 „	4 4	..	4 4	
243	Zellman, A. H.	„	..	..	0 9 0 „	4 4	..	4 4	
244	Oswald, J. S.	„	..	..	0 9 0 „	4 4	0 11	5 3	
245	Keating, R. H.	„	..	..	0 9 0 „	4 4	..	4 4	
246	Linford, F.	„	..	..	0 9 0 „	4 4	0 2	4 6	
247	Johnson, H.	„	..	..	0 9 0	4 4	16 11	21 3	
248	Sawtell, S. T.	„	..	..	0 9 0	4 4	6 11	9 2	
249	Frost, L.	„	..	..	0 9 0 „	4 4	3 7	7 11	
250	Symons, B.	„	..	..	0 9 0 „	4 4	2 2	6 6	
251	Ward, R. H.	„	..	..	0 9 0 „	4 4	4 6	5 6	
252	Couch, J. R.	„	..	..	0 9 0 „	4 4	4 6	8 10	
253	Connor, J.	„	..	..	0 9 0 „	4 4	23 8	10 0	
254	McNab, S. A. D.	„	..	..	0 9 0 „	4 4	3 7	7 11	
255	Russell, M. T.	„	..	..	0 9 0 „	4 4	2 3	6 7	
256	Connor, W. P.	„	..	..	0 9 0 „	4 4	6 1	10 5	
257	Gestro, J.	„	..	..	0 9 0 „	4 4	2 3	6 7	
258	Grimson, H. G.	„	..	..	0 9 0 „	4 4	0 1	4 5	
259	Shutler, S.	„	..	..	0 9 0 „	4 4	0 1	4 5	
260	Strong, F. G. H. B.	„	..	..	0 9 0 „	4 4	..	4 4	
261	O'Brien, C.	„	..	..	0 9 0 „	4 3	2 2	4 3	
262	Cournane, M.	„	..	..	0 9 0 „	4 3	0 3	4 6	
263	Harrison, C. J.	„	..	..	0 9 0 „	4 3	..	4 3	
264	Menzies, J. A. O.	„	..	..	0 9 0 „	4 3	..	4 3	
265	Russell, G. G.	„	..	..	0 9 0 „	4 3	0 1	4 4	
266	Duff, P.	Labourer (Stores)	..	..	0 9 0 „	4 3	..	4 3	
267	Wansbone, J. J.	Porter	..	..	0 9 0 „	4 3	..	4 3	
268	Wright, J. A.	„	..	..	0 9 0 „	4 3	..	4 3	
269	Levick, W. A. P.	„	..	..	0 9 0 „	4 3	..	4 3	
270	Marshall, R. W.	„	..	..	0 9 0 „	4 3	..	4 3	
271	Hunter, J. T.	„	..	..	0 9 0 „	4 2	0 11	5 1	
272	Baker, H.	„	..	..	0 9 0 „	4 2	..	4 2	
273	Gladwin, A. E.	„	..	..	0 9 0 „	4 2	..	4 2	
274	Williams, W.	„	..	..	0 9 0 „	4 2	..	4 2	
275	Mortimer, T. W.	„	..	..	0 9 0 „	4 2	..	4 2	
276	Sutherland, J.	„	..	..	0 9 0 „	4 2	..	4 2	
277	Gillespie, D.	„	..	..	0 9 0 „	4 2	..	4 2	
278	Crockett, G. M.	„	..	..	0 9 0 „	4 2	..	4 2	
279	Congreve, H.	„	..	..	0 9 0 „	4 2	..	4 2	
280	Powell, M.	„	..	..	0 9 0 „	4 2	..	4 2	
281	Quaife, F. W. G.	„	..	..	0 9 0 „	4 2	..	4 2	
282	McBride, W. F.	„	..	..	0 9 0 „	4 2	..	4 2	
283	Espie, A. M.	„	..	..	0 9 0 „	4 2	..	4 2	
284	Mooney, J. P.	„	..	..	0 9 0 „	4 2	..	4 2	
285	Glen, R. J.	„	..	..	0 9 0 „	4 2	4 8	4 2	
286	Barclay, G. L.	„	..	..	0 9 0 „	4 2	..	4 2	
287	Turvey, R. C.	„	..	..	0 9 0 „	4 2	0 4	4 6	
288	Worsop, L. A.	„	..	..	0 9 0 „	4 2	0 7	4 9	
289	Thorne, A. H.	„	..	..	0 9 0 „	4 2	..	4 2	
290	Hilton, J. P.	„	..	..	0 9 0 „	4 2	..	4 2	
291	Roy, J. B.	„	..	..	0 9 0 „	4 2	..	4 2	

RAILWAY DEPARTMENT CLASSIFICATION, 1913—*continued.*

SECOND DIVISION—*continued.*

Class 1: Traffic and Stores—continued.

Prog. No.	Name.	Classification.				Service			Remarks.
		Designation.	Subclass.	Grade.	Rate of Pay	Since last appointed.	Prior to Date last appointed.	For Superannuation Purposes.	
					£ s. d.	Y. M.	Y. M.	Y. M.	
292	Mullins, J.	Porter	..	..	0 9 0 per diem	4 2	..	4 2	
293	Roberts, A.	„	..	..	0 9 0 „	4 2	..	4 2	
294	Hammond, L. J. B.	„	..	..	0 9 0 „	4 1	0 1	4 2	
295	Anderson, W. P.	„	..	..	0 9 0 „	4 1	0 1	4 2	
296	Knox, J.	„	..	..	0 9 0 „	4 1	1 10	5 11	
297	James, F.	„	..	..	0 9 0 „	4 1	..	4 1	
298	Poole, J.	„	..	..	0 9 0 „	4 1	0 2	4 1	
299	Wall, J. H.	„	..	..	0 9 0 „	4 1	..	4 1	
300	Bulger, J. W.	„	..	..	0 9 0 „	4 1	0 6	4 7	
301	Johnston, H.	„	..	..	0 9 0 „	4 1	0 5	4 6	
302	Doig, J.	„	..	..	0 9 0 „	4 1	3 8	4 4	
303	Keown, A. A.	„	..	..	0 9 0 „	4 0	0 9	4 9	
304	Thornton, J. A.	„	..	..	0 9 0 „	4 0	0 5	4 5	
305	Short, F.	„	..	..	0 9 0 „	4 0	0 5	4 5	
306	Machin, P. M.	„	..	..	0 9 0 „	4 0	..	4 0	
307	Thompson, G.	„	..	..	0 9 0 „	4 0	..	4 0	
308	Ferguson, J.	„	..	..	0 9 0 „	4 0	0 2	4 2	
309	Trevithick, J. H.	„	..	..	0 9 0 „	4 0	0 3	4 3	
310	Condon, R. P.	„	..	..	0 9 0 „	9 0	..	9 0	
311	Howes, H. J.	„	..	..	0 9 0 „	9 0	..	9 0	
312	Ryder, T.	„	..	..	0 9 0 „	9 0	..	9 0	
313	Thompson, W. W.	„	..	..	0 9 0 „	9 0	..	9 0	
314	Foley, J. P.	„	..	..	0 9 0 „	9 0	..	9 0	
315	Ryde, F. A.	„	..	..	0 9 0 „	9 0	..	9 0	
316	Stent, R. G.	„	..	..	0 9 0 „	8 11	..	8 11	
317	Cornfoot, G. B.	„	..	..	0 9 0 „	8 11	0 1	9 0	
318	Pascoe, W. H. C.	„	..	..	0 9 0 „	8 11	..	8 11	
319	Jackman, T.	„	..	..	0 9 0 „	8 10	..	8 10	
320	McKenzie, W. L.	„	..	..	0 9 0 „	8 9	..	8 9	
321	Stark, O.	„	..	..	0 9 0 „	8 9	..	8 9	
322	Smart, T. W.	„	..	..	0 9 0 „	8 8	..	8 8	
323	McLeod, R.	„	..	..	0 9 0 „	8 8	..	8 8	
324	Ryan, J. L.	„	..	..	0 9 0 „	8 8	..	8 8	
325	Muller, F. I. A.	„	..	..	0 9 0 „	8 7	..	8 7	
326	Kermode, G. E. C.	„	..	..	0 9 0 „	8 7	..	8 7	
327	White, T. H.	„	..	..	0 9 0 „	8 7	..	8 7	
328	Strack, C. G.	„	..	..	0 9 0 „	8 7	0 4	8 11	
329	Costello, T. J.	„	..	..	0 9 0 „	8 6	..	8 6	
330	McGinn, J. H.	„	..	..	0 9 0 „	8 6	..	8 6	
331	Robertson, M. M.	„	..	..	0 9 0 „	8 6	..	8 6	
332	Wisnesky, A. H. F.	„	..	..	0 9 0 „	8 6	..	8 6	
333	Nelson, C. H.	„	..	..	0 9 0 „	8 5	..	8 5	
334	Fergus, A.	„	..	..	0 9 0 „	8 4	..	8 4	
335	Herbert, F. A.	„	..	..	0 9 0 „	8 4	..	8 4	
336	McLaughlin, H. J.	„	..	..	0 9 0 „	8 3	..	8 3	
337	Steele, J.	„	..	..	0 9 0 „	8 3	..	8 3	
338	Kearns, J.	„	..	..	0 9 0 „	8 3	..	8 3	
339	Bovaird, J. J.	„	..	..	0 9 0 „	8 3	..	8 3	
340	Cooper, W. C.	„	..	..	0 9 0 „	8 3	..	8 3	
341	Morrison, T.	„	..	..	0 9 0 „	8 2	..	8 2	
342	Batty, A. H.	„	..	..	0 9 0 „	8 1	..	8 1	
343	McEachen, P. J.	„	..	..	0 9 0 „	8 1	..	8 1	
344	Fox, E. W.	„	..	..	0 9 0 „	4 0	0 8	4 8	
345	Woods, N. G.	„	..	..	0 9 0 „	4 0	..	4 0	
346	Melvin, H. H.	„	..	..	0 9 0 „	4 0	1 1	5 1	
347	Fairburn, E.	„	..	..	0 9 0 „	4 0	0 3	4 3	
348	Stone, H. J. R.	„	..	..	0 9 0 „	4 0	0 4	4 4	
349	Eliott, F. A.	„	..	..	0 9 0 „	4 0	..	4 0	
350	Henshaw, E. O.	„	..	..	0 9 0 „	4 0	0 9	4 9	
351	Gurney, H. H.	„	..	..	0 9 0 „	4 0	..	4 0	
352	Henderson, R.	„	..	..	0 9 0 „	4 0	..	4 0	
353	Such, A. V.	„	..	..	0 9 0 „	3 11	1 1	5 0	
354	Story, R. F.	„	..	..	0 9 0 „	3 11	0 6	4 5	
355	Currie, B.	„	..	..	0 9 0 „	3 11	..	3 11	
356	Watt, J.	„	..	..	0 9 0 „	3 11	..	3 11	
357	Diggle, A.	„	..	..	0 9 0 „	3 11	..	3 11	
358	Maxwell, A. H.	„	..	..	0 9 0 „	3 11	0 3	4 2	
359	Shirley, A. E.	„	..	..	0 9 0 „	3 11	..	3 11	
360	Rabbitt, W.	„	..	..	0 9 0 „	3 11	..	3 11	
361	Sainty, H. H.	„	..	..	0 9 0 „	3 11	1 0	4 11	
362	Emmett, A. F.	„	..	..	0 9 0 „	3 11	..	3 11	
363	Turvey, W. F.	„	..	..	0 9 0 „	3 11	..	3 11	
364	Sweetman, C. H. A.	„	..	..	0 9 0 „	3 11	0 5	4 4	
365	Milburn, C. W.	„	..	..	0 9 0 „	3 11	0 1	4 0	
366	Williams, Albert Vincent	„	..	..	0 9 0 „	3 10	0 2	4 0	
367	Johnston, W. J.	„	..	..	0 9 0 „	3 10	0 2	4 0	
368	Rees, E. A.	„	..	..	0 9 0 „	3 10	2 0	5 10	

RAILWAY DEPARTMENT CLASSIFICATION, 1913—*continued.*

SECOND DIVISION—*continued.*

Class 1: Traffic and Stores—continued.

Prog. No.	Name.	Classification.				Service			Remarks.
		Designation.	Subclass.	Grade.	Rate of Pay.	Since last appointed.	Prior to Date last appointed.	For Superannuation Purposes.	
					£ s. d.	Y. M.	Y. M.	Y. M.	
369	Daly, T.	Porter	..	..	0 9 0 per diem	3 10	0 2	4 0	
370	Clark, T. A.	„	..	..	0 9 0 „	3 9	0 2	4 1	
371	Moroney, J.	„	..	..	0 9 0 „	3 9	0 3	4 0	
372	Gilmour, T. A.	„	..	..	0 9 0 „	3 9	..	3 9	
373	Simms, D.	„	..	..	0 9 0 „	3 8	0 2	3 10	
374	Kyle, J.	„	..	..	0 9 0 „	3 8	0 2	3 10	
375	Bevans, G. H.	„	..	..	0 9 0 „	3 8	0 1	3 9	
376	Dunne, T.	„	..	..	0 9 0 „	3 8	0 2	3 10	
377	McFarlane, J.	„	..	..	0 9 0 „	3 7	0 3	3 10	
378	Murphy, T.	„	..	..	0 9 0 „	3 7	0 8	4 3	
379	O'Brien, J.	„	..	..	0 9 0 „	3 5	0 7	4 0	
380	Barnes, H. A. L.	„	..	..	0 9 0 „	3 4	0 7	3 11	
381	Higson, W. R.	„	..	..	0 9 0 „	3 1	0 10	3 11	
382	Perrin, J. D.	„	..	..	0 9 0 „	8 6	..	8 0	
383	Zellman, O.		..	..	0 9 0 „	7 11	..	7 11	
384	Morgan, C. A.	„	..	..	0 9 0 „	7 10	..	7 10	
385	Culley, J. A.	„	..	..	0 9 0 „	7 10	.	7 10	
386	Drury, J. S.	„	..	..	0 9 0 „	7 9	..	7 9	
387	Rowe, J.	„	..	..	0 9 0 „	8 0	..	8 0	
388	Tarrant, W. P.	„	..	..	0 9 0 „	7 8	..	7 8	
389	Corcoran, B. L.	„	..	..	0 9 0 „	7 7	..	7 7	
390	Radford, A. B.	„	..	..	0 9 0 „	7 6	..	7 6	
391	Ronowiez, V. J.	„	..	..	0 9 0 „	7 6	..	7 6	
392	Eathorne, E. J.	„	..	..	0 9 0 „	7 5	..	7 5	
393	Franklin, T. M.	„	..	..	0 9 0 „	7 4	..	7 4	
394	Cameron, J. A.	„	..	..	0 9 0 „	7 3	..	7 3	
395	Spencer, J. W.	„	..	..	0 9 0 „	7 3	.	7 3	
396	McMorran, W. F.	„	..	..	0 9 0 „	7 3	..	7 3	
397	Hunter, J. L.	„	..	..	0 9 0 „	7 3	..	7 3	
398	Gibb, R.	„	..	..	0 9 0 „	7 3	..	7 3	
399	Skeen, F.	„	..	..	0 9 0 „	7 2	..	7 2	
400	Corkill, J. C.	„	..	..	0 9 0 „	7 2	..	7 2	
401	Daily, J. A. D.	„	..	..	0 9 0 „	7 2	..	7 2	
402	Ward, J. H.		..	..	0 9 0	7 1	..	7 1	
403	Chammen, H. F.	„	..	..	0 9 0	7 1	..	7 1	
404	Pearson, G.	„	..	..	0 9 0	7 1	..	7 1	
405	McLachlan, A.	„	..	..	0 9 0 „	7 1	..	7 1	
406	Purdy, C.	„	..	..	0 9 0 „	7 0	..	7 0	
407	Kane, P. J.	„	..	..	0 9 0 „	7 0	..	7 0	
408	Seddon, B. J.	Labourer (Stores)	..	..	0 9 0 „	3 0	1 7	4 7	
409	Bell, J.	Porter	..	..	0 9 0 „	2 11	1 0	3 11	
410	Turner, D. L. A.	„	..	..	0 9 0 „	2 11	..	2 11	
411	Graham, H. B.	„	..	..	0 9 0 „	2 11	..	2 11	
412	Cubitt, E. R.	„	..	..	0 9 0 „	2 11	..	2 11	
413	Liddell, J. G.	„	..	..	0 9 0	2 11	..	2 11	
414	Dillistone, J. J.	„	..	..	0 9 0 „	2 11	..	2 11	
415	Collins, T.		..	..	0 9 0	2 10	..	2 10	
416	Simpson, J. B.	„	..	..	0 9 0 „	2 10	0 3	2 10	
417	Robertson, G. T.		..	..	0 9 0 „	2 10	..	2 10	
418	Allan, F. W.	„	..	..	0 9 0 „	2 10	..	2 10	
419	Cunniffe, M. F.	„	..	..	0 9 0	2 10	..	2 10	
420	Bower, J. M.	„	..	..	0 9 0 „	2 10	..	2 10	
421	French, R. M.	„	..	..	0 9 0	2 10	..	2 10	
422	Robinson, J. H.	„	..	..	0 9 0 „	2 10	..	2 10	
423	Thorburn, A.	„	..	..	0 9 0 „	2 9	..	2 9	
424	Jack, R.	„	..	..	0 9 0 „	2 9	..	2 9	
425	Harvey, W.	„	..	..	0 9 0 „	2 9	..	2 9	
426	Owen, R. A.	„	..	..	0 9 0 „	2 9	..	2 9	
427	Averis, J. C.	„	..	..	0 9 0 „	2 8	..	2 8	
428	Proud, J. B.	„	..	..	0 9 0 „	2 8	0 9	3 5	
429	Watt, D.	„	..	..	0 9 0 „	2 8	..	2 8	
430	Miller, W. E.	„	..	..	0 9 0 „	2 8	..	2 8	
431	Morrow, J.	„	..	..	0 9 0 „	2 8	..	2 8	
432	Wright, T. W.	„	..	..	0 9 0 „	2 8	..	2 8	
433	Laverty, C.	„	..	..	0 9 0 „	2 8	..	2 8	
434	Watson, W.	„	..	..	0 9 0 „	2 8	..	2 8	
435	Adams, H. G.	„	..	..	0 9 0 „	2 8	..	2 8	
436	Simpson, A. A.	„	..	..	0 9 0 „	2 8	..	2 8	
437	Munn, F. W.	„	..	..	0 9 0 „	2 8	..	2 8	
438	O'Callaghan, E.	„	..	..	0 9 0 „	2 8	..	2 8	
439	Hare, G. W.	„	..	..	0 9 0 „	2 7	..	2 7	
440	Bacon, B. L.	„	..	..	0 9 0 „	2 7	..	2 7	
441	Little, J.	„	..	..	0 9 0 „	2 7	..	2 7	
442	Haines, A. J.	„	..	..	0 9 0 „	2 7	..	2 7	
443	Hamilton, B.	„	..	..	0 9 0 „	2 7	..	2 7	
444	Martin, C. F.	„	..	..	0 9 0 „	2 7	..	2 7	

RAILWAY DEPARTMENT CLASSIFICATION, 1913—*continued.*

SECOND DIVISION—*continued.*

Class 1: Traffic and Stores—continued.

Prog. No.	Name.	Classification. Designation.	Subclass.	Grade.	Rate of Pay.	Service: Since last appointed.	Service: Prior to Date last appointed.	Service: For Superannuation Purposes.	Remarks.
					£ s. d.	Y. M.	Y. M.	Y. M.	
445	Gick, R. L.	Porter	..	..	0 9 0 per diem	2 7	..	2 7	
446	Ness, J. A.	"	..	..	0 9 0 "	2 7	..	2 7	
447	Hopping, C. H.	"	..	..	0 9 0 "	2 6	..	2 6	
448	Brothers, C. E. H.	"	..	..	0 9 0 "	2 6	..	2 6	
449	Haining, J.	"	..	..	0 9 0 "	2 6	..	2 6	
450	Rossiter, B. J.	"	..	..	0 9 0 "	2 6	..	2 6	
451	Dixon, H. W.	"	..	..	0 9 0 "	2 6	..	2 6	
452	Fenton, J. N.	"	..	..	0 9 0 "	2 5	..	2 5	
453	Phillips, T. M.	"	..	..	0 9 0 "	2 5	..	2 5	
454	Taylor, W.	"	..	..	0 9 0 "	2 5	0 5	2 5	
455	Davidson, R. W.	"	..	..	0 9 0 "	2 5	..	2 5	
456	Stamp, A. V.	"	..	..	0 9 0 "	2 5	..	2 5	
457	Capper, H. E.	"	..	..	0 9 0 "	2 5	..	2 5	
458	Hardcastle, J.	"	..	..	0 9 0 "	2 4	7 0	2 4	
459	Tate, A.	Labourer (Stores)	..	..	0 9 0 "	2 4	..	2 4	
460	Strachan, J. B.	Porter	..	..	0 9 0 "	2 4	0 4	2 4	
461	Halliday, T. A.	"	..	..	0 9 0 "	2 4	..	2 4	
462	Quigley, R.	"	..	..	0 9 0 "	2 4	..	2 4	
463	Kelly, A. E.	"	..	..	0 9 0 "	2 4	..	2 4	
464	Pownceby, J. A.	Labourer (Stores)	..	..	0 9 0 "	2 4	..	2 4	
465	Dunbar, H. W. F.	"	..	..	0 9 0 "	2 4	..	2 4	
466	Mayo, L. G.	Porter	..	..	0 9 0 "	4 4	3 10	8 2	
467	Wild, P. J.	"	..	..	0 9 0 "	4 4	2 6	6 10	
468	Allan, A. C.	"	..	..	0 9 0 "	4 4	3 8	8 0	
469	Wilson, R.	"	..	..	0 9 0 "	4 4	1 3	5 7	
470	Lindsay, H. W.	"	..	..	0 9 0 "	2 4	0 8	3 0	
471	Hope, T.		..	..	0 9 0 "	2 4	..	2 4	
472	Wright, H. B.	"	..	..	0 9 0 "	2 3	..	2 3	
473	Johnson, W. V.	"	..	..	0 9 0 "	2 3	..	2 3	
474	Laing, C. O.	"	..	..	0 9 0 "	2 3	..	2 3	
475	Instone, O.		..	..	0 9 0 "	2 3	1 8	2 3	
476	Gridgeman, J.	"	..	..	0 9 0 "	2 3	..	2 3	
477	Styles, W. W.	"	..	..	0 9 0 "	2 3	..	2 3	
478	Belchamber, A.	"	..	..	0 9 0 "	2 3	..	2 3	
479	Taylor, J.	" (Christchurch)	..	..	0 9 0 "	2 3	..	2 3	
480	Beazley, H.	"	..	..	0 9 0 "	2 3	..	2 3	
481	Scott, G. G.	"	..	..	0 9 0 "	2 3	..	2 3	
482	Rendall, T. G.	"	..	..	0 9 0 "	2 3	..	2 3	
483	Jansen, N.	"	..	..	0 9 0 "	2 3	..	2 3	
484	Korner, G.	"	..	..	0 9 0 "	2 2	..	2 2	
485	Callingham, T. H.	"	..	..	0 9 0 "	2 2	..	2 2	
486	Bartholomew, B.	"	..	..	0 9 0 "	2 2	..	2 2	
487	Chalk, H. C.	"	..	..	0 9 0 "	2 2	..	2 2	
488	Walsh, J.	"	..	..	0 9 0 "	2 2	..	2 2	
489	Moriarty, J. F. S.	"	..	..	0 9 0 "	2 2	..	2 2	
490	Whakaeke, T. T.	"	..	..	0 9 0 "	2 2	..	2 2	
491	Cook, R. G.	"	..	..	0 9 0 "	2 2	..	2 2	
492	Taylor, W. B.	" (Picton)	..	..	0 9 0 "	2 2	..	2 2	
493	Sadd, W. H.	"	..	..	0 9 0 "	2 2	2 6	2 2	
494	King, G. H.	"	..	..	0 9 0 "	2 2	..	2 2	
495	Colson, F. W.	"	..	..	0 9 0 "	2 2	..	2 2	
496	Baigent, B. A.	"	..	..	0 9 0 "	2 1	..	2 1	
497	Kilburn, A. E.	"	..	..	0 9 0 "	2 1	3 4	2 1	
498	Spence, W. R.	"	..	..	0 9 0 "	2 1	..	2 1	
499	Morris, G. E.	"	..	..	0 9 0 "	2 1	..	2 1	
500	Vinicombe, H.	"	..	..	0 9 0 "	2 1	..	2 1	
501	Vogel, J. F.	"	..	..	0 9 0 "	2 1	..	2 1	
502	Mole, F.	"	..	..	0 9 0 "	2 1	..	2 1	
503	Goudie, A.	"	..	..	0 9 0 "	2 1	..	2 1	
504	Small, M.	"	..	..	0 9 0 "	2 1	..	2 1	
505	Pellew, J. E.	"	..	..	0 9 0 "	2 1	..	2 1	
506	Burden, E. T. J.	"	..	..	0 9 0 "	2 1	..	2 1	
507	Durry, T.	"	..	..	0 9 0 "	2 0	2 0	2 0	
508	Pont, C. W.	"	..	..	0 9 0 "	2 0	0 1	2 0	
509	Smith, T. R.	"	..	..	0 9 0 "	2 0	3 9	2 0	
510	Spowart, J.	"	..	..	0 9 0 "	2 0	..	2 0	
511	Bright, H. E.	"	..	..	0 9 0	2 0	..	2 0	
512	Whitaker, J. H.	"	..	..	0 9 0 "	2 0	..	2 0	
513	Connelly, M.		..	..	0 9 0	2 0	..	2 0	
514	Gray, E. E.		..	..	0 9 0 "	6 11	..	6 11	
515	Dawson, G. F.	"	..	..	0 9 0 "	6 10	..	6 10	
516	Traill, J. P.	"	..	..	0 9 0 "	6 10	..	6 10	
517	Ward, R. G.	"	..	..	0 9 0 "	6 10	..	6 10	
518	Rasmussen, H. C.	"	..	..	0 9 0 "	6 9	1 3	6 9	
519	Dickson, W. H.	"	..	..	0 9 0 "	6 9	..	6 9	
520	Rowe, T.	"	..	..	0 9 0 "	6 9	..	6 9	
521	Askew, E. J.	"	..	..	0 9 0 "	6 8	..	6 8	

RAILWAY DEPARTMENT CLASSIFICATION, 1913—*continued.*

SECOND DIVISION—*continued.*

Class 1: Traffic and Stores—continued.

Prog. No.	Name.	Classification.				Service			Remarks.
		Designation.	Subclass.	Grade.	Rate of Pay.	Since last appointed.	Prior to Date last appointed.	For Superannuation Purposes.	
					£ s. d.	Y. M.	Y. M.	Y. M.	
522	Sims, H. N.	Porter	..	..	0 9 0 per diem	6 8	..	6 8	
523	McNeil, G.	„	..	..	0 9 0 „	6 8	..	6 8	
524	Russell, F.	„	..	..	0 9 0 „	6 8	..	6 8	
525	Pullar, T. E.	„	..	..	0 9 0 „	6 6	..	6 6	
526	Brown, J.	„ (Wingatui)	..	..	0 9 0 „	6 6	..	6 6	
527	Pinfold, F. J.	„	..	..	0 9 0 „	6 6	0 3	6 9	
528	Bicknell, F. G.	„	..	..	0 9 0 „	6 6	..	6 6	
529	Couper, A. J.	„	..	..	0 9 0 „	6 5	..	6 5	
530	Jackson, H. J.	„	..	..	0 9 0 „	6 2	..	6 2	
531	Howie, J. A.	„	..	..	0 9 0 „	6 1	..	6 1	
532	Finnerty, J.	„	..	..	0 9 0 „	6 1	..	6 1	
533	Hambling, E. J.	Labourer (Stores)	..	..	0 9 0 „	6 0	..	6 0	
534	Davison, E.	Porter	..	..	0 9 0 „	5 9	0 5	6 2	
535	Cruickshank, W. H.	„	..	..	0 9 0 „	2 0	..	2 0	
536	Bernech, J.	„	..	..	0 9 0 „	2 0	..	2 0	
537	Goudie, S.	„	..	..	0 9 0 „	2 0	..	2 0	
538	Lloyd, G. M.	„	..	..	0 9 0 „	2 0	..	2 0	
539	Hughes, J.	„	..	..	0 9 0 „	2 0	..	2 0	
540	Calvert, A.	„	..	..	0 9 0 „	2 0	..	2 0	
541	Robertson, W. A.	„	..	..	0 9 0 „	1 11	..	1 11	
542	Beaton, A.	„	..	..	0 9 0 „	1 11	..	1 11	
543	Molloy, J. P.	„	..	..	0 9 0 „	1 11	..	1 11	
544	Des Forges, H. H.	„	..	..	0 9 0 „	1 11	0 9	1 11	
545	Carmody, G. D.	„	..	..	0 9 0 „	1 11	..	1 11	
546	McCartie, N. P.	„	..	..	0 9 0 „	1 11	..	1 11	
547	McLennan, E. J.	„	..	..	0 9 0 „	1 11	6 8	1 11	
548	Wansbone, J.	„	..	..	0 9 0 „	1 11	..	1 11	
549	Leahy, J. E.	„	..	..	0 9 0 „	1 11	..	1 11	
550	Delaney, J. F.	„	..	..	0 9 0 „	1 11	9 6	1 11	
551	Boocock, J.	„	..	..	0 9 0 „	1 11	0 2	2 1	
552	Dysart, W.	„	..	..	0 9 0 „	1 11	..	1 11	
553	Crawford, J. M.	„	..	..	0 9 0 „	1 11	..	1 11	
554	Nightingale, H.	„	..	..	0 9 0 „	1 11	..	1 11	
555	Clay, J. O.	„	..	..	0 9 0 „	1 11	2 4	4 3	
556	Henderson, A. J.	„	..	..	0 9 0 „	1 11	..	1 11	
557	Terrell, F. H.	„	..	..	0 9 0 „	1 11	..	1 11	
558	Clay, E. H.	„	..	..	0 9 0 „	1 11	3 3	5 2	
559	Wilson, W.	„	..	..	0 9 0 „	1 11	..	1 11	
560	Naughton, P.	„	..	..	0 9 0 „	1 11	..	1 11	
561	Hollebon, F. T.	„	..	..	0 9 0 „	1 11	..	1 11	
562	Guilliard, A.	„	..	..	0 9 0 „	1 11	..	1 11	
563	Balneaves, A. E.	„	..	..	0 9 0 „	1 10	..	1 10	
564	Hutton, W. M.	„	..	..	0 9 0 „	1 10	..	1 10	
565	Henderson, T.	„	..	..	0 9 0 „	1 10	..	1 10	
566	Collett, J.	„	..	..	0 9 0 „	1 10	..	1 10	
567	Donaldson, W.	„	..	..	0 9 0 „	1 10	..	1 10	
568	Fitt, A.	„	..	..	0 9 0 „	1 10	..	1 10	
569	Scelly, C.	„	..	..	0 9 0 „	1 10	..	1 10	
570	Boniface, J. L.	„	..	..	0 9 0 „	1 10	..	1 10	
571	Barr, W. G.	„	..	..	0 9 0 „	1 10	..	1 10	
572	Lomas, G. E.	„	..	..	0 9 0 „	1 10	..	1 10	
573	Childs, J. J.	„	..	..	0 9 0 „	1 10	..	1 10	
574	Pearce, S. G.	„	..	..	0 9 0 „	1 10	..	1 10	
575	Hall, G. E. S.	„	..	..	0 9 0 „	1 10	2 6	1 10	
576	Dick, S.	„	..	..	0 9 0 „	1 10	..	1 10	
577	Ryan, M. J.	„	..	..	0 9 0 „	1 10	..	1 10	
578	McGilvray, J. M.	„	..	..	0 9 0 „	1 9	11 9	1 9	
579	Sanders, J.	„	..	..	0 9 0 „	1 9	..	1 9	
580	Seymour, S. R.	„	..	..	0 9 0 „	1 9	..	1 9	
581	Ewert, L.	„	..	..	0 9 0 „	1 9	..	1 9	
582	Smith, J.	„ (Newmarket)	..	..	0 9 0 „	1 9	..	1 9	
583	Wilson, W. D.	„	..	..	0 9 0 „	1 9	..	1 9	
584	McErlain, P.	„	..	..	0 9 0 „	1 9	..	1 9	
585	Brown, J.	„ (Silverstream)	..	..	0 9 0 „	1 9	..	1 9	
586	Carroll, W.	„	..	..	0 9 0 „	1 9	..	1 9	
587	Lawrenson, A.	„	..	..	0 9 0 „	1 9	..	1 9	
588	Taylor, J.	„ (Lyttelton)	..	..	0 9 0 „	1 9	..	1 9	
589	Hooper, F. W. J.	„	..	..	0 9 0 „	1 9	..	1 9	
590	Paterson, A. M., jun.	„	..	..	0 9 0 „	1 8	..	1 8	
591	O'Callaghan, T. A.	„	..	..	0 9 0 „	1 8	..	1 8	
592	Matthews, C.	„	..	..	0 9 0 „	1 8	..	1 8	
593	Owen, J. T.	„	..	..	0 9 0 „	1 8	..	1 8	
594	Holder, F. E. J.	„	..	..	0 9 0 „	1 8	..	1 8	
595	Farquhar, W. H.	„	..	..	0 9 0 „	1 8	..	1 8	
596	Gaskin, W. J.	„	..	..	0 9 0 „	1 8	..	1 8	
597	McCreanor, J.	„	..	..	0 9 0 „	1 8	0 8	2 4	
598	Durry, G.	„	..	..	0 9 0 „	1 8	..	1 9	

RAILWAY DEPARTMENT CLASSIFICATION, 1913—*continued.*

SECOND DIVISION—*continued.*

Class 1: Traffic and Stores—continued.

Prog. No.	Name.	Classification.				Service			Remarks.
		Designation.	Subclass.	Grade.	Rate of Pay	Since last appointed.	Prior to Date last appointed.	For Superannuation Purposes.	
					£ s. d.	Y. M.	Y. M.	Y. M.	
599	Quigley, E.	Porter	..	..	0 9 0 per diem	1 8	..	1 8	
600	Gribble, H. C.	"	..	..	0 9 0 "	1 8	0 6	2 2	
601	Hardy, D. W.	"	..	..	0 9 0 "	1 8	2 0	3 8	
602	McDonald, D. A.	"	..	..	0 9 0 "	1 8	..	1 8	
603	Haigh, G. D.	"	..	..	0 9 0 "	1 8	..	1 8	
604	Whall, F.	"	..	..	0 9 0 "	1 8	7 2	1 8	
605	Elkis, W. H.	"	..	..	0 9 0 "	6 1	..	6 1	
606	MacLean, D. S.	"	..	..	0 9 0 "	1 8	..	1 8	
607	Harris, G. H.	"	..	..	0 9 0 "	1 8	1 11	3 7	
608	Applegarth, E. L.	"	..	..	0 9 0 "	1 8	..	1 8	
609	Ramsay, J. T.	"	..	..	0 9 0 "	1 8	..	1 8	
610	Hurley, E. J.	"	..	..	0 9 0 "	1 8	..	1 8	
611	Fleet, H. E. M.	"	..	..	0 9 0 "	1 7	..	1 7	
612	Patterson, W. J.	"	..	..	0 9 0 "	1 7	..	1 7	
613	Andrews, T. T.	"	..	..	0 9 0 "	1 7	..	1 7	
614	Thomson, D.	"	..	..	0 9 0 "	1 7	..	1 7	
615	Ellis, G.	"	..	..	0 9 0 "	1 7	..	1 7	
616	Compton, T. H.	"	..	..	0 9 0 "	1 7	..	1 7	
617	Ganderton, A. A.		..	..	0 9 0 "	1 7	..	1 7	
618	Dobby, G. T.		..	..	0 9 0	1 7	..	1 7	
619	Rose, H. C.	"	..	..	0 9 0 "	1 7	..	1 7	
620	Anderson, W. G.	"	..	..	0 9 0 "	1 7	..	1 7	
621	Nicol, T. J. B.	"	..	..	0 9 0 "	6 6	..	6 6	
622	Gayton, F. W.	"	..	..	0 9 0 "	1 7	..	1 7	
623	Chapman, H. J.	"	..	..	0 9 0 "	1 7	..	1 7	
624	McLean, J. M.	" (Ngawapurua)	..	..	0 9 0 "	1 7	..	1 7	
625	Humphries, C. E.		..	..	0 9 0 "	1 7	..	1 7	
626	Roberts, J. R.	"	..	..	0 9 0 "	1 7	..	1 7	
627	Allen, F. J.	"	..	..	0 9 0 "	1 7	..	1 7	
628	Henderson, H. E.	"	..	..	0 9 0 "	1 7	..	1 7	
629	Dixon, A.	"	..	..	0 9 0 "	1 7	3 3	1 7	
630	Baker, A. W.	"	..	..	0 9 0 "	1 6	0 2	1 8	
631	Jillings, A.	"	..	..	0 9 0 "	1 6	..	1 6	
632	Ferguson, D.	"	..	..	0 9 0 "	1 6	..	1 6	
633	Harrby, H. W.	"	..	..	0 9 0 "	1 6		1 6	
634	Riley, J.	"	..	..	0 9 0 "	1 6	..	1 6	
635	Sidey, A. J.	"	..	..	0 9 0 "	1 6	..	1 6	
636	Binns, R. B.	"	..	..	0 9 0 "	1 6	..	1 6	
637	Daly, D. F.	"	..	..	0 9 0 "	1 6	..	1 6	
638	Simmons, W. C.	"	..	..	0 9 0 "	1 6	..	1 6	
639	Cox, A.	"	..	..	0 9 0 "	1 6	..	1 6	
640	Curtin, J.	"	..	..	0 9 0 "	1 6	..	1 6	
641	McEwan, R. S.	"	..	..	0 9 0 "	1 6	..	1 6	
642	Stevenson, W. S.	"	..	..	0 9 0 "	1 6	..	1 6	
643	Wilson, W. H.	Labourer (Stores)	..	..	0 9 0 "	1 6	..	1 6	
644	Higgins, A. C.	Porter	..	..	0 9 0 "	1 6	..	1 6	
645	Seyb, H.	"	..	..	0 9 0 "	1 5	..	1 5	
646	Reynolds, L. B.	"	..	..	0 9 0 "	1 5	..	1 5	
647	Chave, C. V.	"	..	..	0 9 0 "	1 5	..	1 9	
648	Foster, G. B.	"	..	..	0 9 0 "	1 5	..	1 5	
649	McCormack, G. J.	"	..	..	0 9 0 "	1 5	..	1 5	
650	Connell, H. J. M.	"	..	..	0 9 0 "	1 5	..	1 5	
651	Walker, H. A.	"	..	..	0 9 0 "	1 5	..	1 5	
652	Stubbs, H. H.	"	..	..	0 9 0 "	1 5	..	1 5	
653	Rowe, W. J.	"	..	..	0 9 0 "	1 5	..	1 5	
654	Stinson, J.	"	..	..	0 9 0 "	1 5	..	1 5	
655	Arrowsmith, J. H.	"	..	..	0 9 0 "	1 5	..	1 5	
656	McKay, M. D.	"	..	..	0 9 0 "	1 5	..	1 5	
657	Allen, C. B.	"	..	..	0 9 0 "	1 5	..	1 5	
658	Ryan, J.	Labourer (Stores, Petone)	..	..	0 9 0 "	1 5	..	1 5	
659	Ramsay, J.	Porter	..	..	0 9 0 "	1 5	..	1 5	
660	O'Hare, J.	"	..	..	0 9 0 "	1 5	..	1 5	
661	McLeod, J. M.	"	..	..	0 9 0 "	1 5	..	1 5	
662	Tapp, P. E.	"	..	..	0 9 0 "	1 5	..	1 5	
663	Reed, F.	"	..	..	0 9 0 "	1 4	..	1 4	
664	Townrow, W. A.	"	..	..	0 9 0 "	1 4	..	1 4	
665	Adcock, W. S.	"	..	..	0 9 0 "	1 4	..	1 4	
666	Nevin, T. F.	"	..	..	0 9 0 "	1 4	..	1 4	
667	Bentley, W. C. A.	"	..	..	0 9 0 "	1 4	..	1 4	
668	Yorston, T. E. M.	"	..	..	0 9 0 "	1 4	2 2	1 4	
669	Laurenson, L. D.	"	..	..	0 9 0 "	1 4	..	1 4	
670	Scott, H. B.	"	..	..	0 9 0 "	4 4	1 5	5 9	
671	Westerby, W. J.	Labourer (Stores)	..	..	0 9 0 "	4 4	1 3	5 7	
672	Dearsley, O. T.	Porter	..	..	0 9 0 "	1 4	..	1 4	
673	Otton, F. T.	"	..	..	0 9 0 "	1 4	..	1 4	
674	Driver, T.	"	..	..	0 9 0 "	1 4	..	1 4	
675	Williams, G.	"	..	..	0 9 0 "	1 4	..	1 4	

Railway Department Classification, 1913—*continued*.

SECOND DIVISION—*continued*.

Class 1: Traffic and Stores—continued.

Prog. No.	Name.	Classification.				Service			Remarks.
		Designation.	Subclass.	Grade.	Rate of Pay	Since last appointed.	Prior to Date last appointed.	For Superannuation Purposes.	
					£ s. d.	Y. M.	Y. M.	Y. M.	
676	Kennedy, J. H. L.	Porter	..	..	0 9 0 per diem	1 4	3 9	1 4	
677	Rizzi, A. A.	„	..	..	0 9 0 „	1 3	..	1 3	
678	Ellis, J.	„	..	..	0 9 0 „	1 3	..	1 3	
679	Aukett, A. E.	„	..	..	0 9 0 „	1 3	..	1 3	
680	Haddon, F.	„	..	..	0 9 0 „	1 3	..	1 3	
681	Knight, H.	„	..	..	0 9 0 „	1 3	1 7	1 3	
682	Lightfoot, J.	„	..	..	0 9 0 „	1 3	..	1 3	
683	Walton, A. L.	„	..	..	0 9 0 „	1 3	..	1 3	
684	Winfield, T.	„	..	..	0 9 0 „	1 3	..	1 3	
685	Tucker, V. J.	„	..	..	0 9 0 „	1 3	0 6	1 3	
686	Shearer, A. N.	„	..	..	0 9 0 „	1 3	..	1 3	
687	Maclachlan, R.	„	..	..	0 9 0 „	1 3	0 1	1 4	
688	Bate, O. E.	„	..	..	0 9 0 „	1 3	2 11	1 3	
689	Bullin, A.	„	..	..	0 9 0 „	1 3	3 7	1 3	
690	Howarth, W.	„	..	..	0 9 0 „	1 3	0 5	1 8	
691	Drake, J.	„	..	..	0 9 0 „	1 3	..	1 3	
692	Parnell, H. W.	„	..	..	0 9 0	1 3	..	1 3	
693	Mills, A. C.	„	..	..	0 9 0 „	1 2	0 1	1 3	
694	McDonald, L. J.	„	..	..	0 9 0 „	1 2	..	1 2	
695	Withers, W.	„	..	..	0 9 0 „	1 2	..	1 2	
696	La Broome, W. T.	„	..	..	0 9 0 „	1 2	..	1 2	
697	Anderson, W.	„	..	..	0 9 0 „	1 2	..	1 2	
698	Harris, B. J. L.	„	..	..	0 9 0 „	1 2	..	1 2	
699	Pine, O. J. M.	„	..	..	0 9 0 „	1 2	..	1 2	
700	Simpson, A. G.	„	..	..	0 9 0 „	1 2	..	1 2	
701	Pritchard, W. J.	„	..	..	0 9 0 „	1 2	..	1 2	
702	Selfe, W. H.	„	..	..	0 9 0 „	1 2	..	1 2	
703	Price, J. C.	„	..	..	0 9 0 „	1 2	..	1 2	
704	Barber, W. S. J.	„	..	..	0 9 0 „	1 2	..	1 2	
705	Evans, E. J.	„	..	..	0 9 0 „	1 2	..	1 2	
706	Small, F. J. P.	„	..	..	0 9 0 „	1 2	..	1 2	
707	Beswick, E. C.	„	..	..	0 9 0 „	1 2	..	1 2	
708	Bentley, A. J. E.	„	..	..	0 9 0 „	1 1	..	1 1	
709	McCartney, F.	„	..	..	0 9 0 „	1 1	0 1	1 2	
710	Lamberton, J. A.	„	..	..	0 9 0 „	1 1	..	1 1	
711	McDonald, S. B.	„	..	..	0 9 0 „	1 1	..	1 1	
712	McLenaghin, W. H.	„	..	..	0 9 0 „	1 1	..	1 1	
713	Reese, G. H.	„	..	..	0 9 0 „	1 1	2 10	1 1	
714	Moor, J. B.	„	..	..	0 9 0 „	1 1	..	1 1	
715	Brock, A. J.	„	..	..	0 9 0 „	1 1	..	1 1	
716	Killeen, P. W.	„	..	..	0 9 0 „	1 1	..	1 1	
717	Rayworth, W. H.	„	..	..	0 9 0 „	1 1	..	1 1	
718	Cochrane, D. T.	„	..	..	0 9 0 „	1 1	..	1 1	
719	Arlidge, A. J.	„	..	..	0 9 0 „	1 1	..	1 1	
720	Gifford, H. F.	„	..	..	0 9 0 „	1 1	..	1 1	
721	McMillan, T.	„	..	..	0 9 0 „	1 1	..	1 1	
722	Lindsay, R.	„	..	..	0 9 0 „	1 1	..	1 1	
723	Froggatt, C.	Labourer (Stores)	..	..	0 9 0 „	1 1	..	1 1	
724	May, J.	„	..	..	0 9 0 „	1 1	..	1 1	
725	O'Donohue, D.	„	..	..	0 9 0 „	1 1	..	1 1	
726	Moloney, W. M.	Porter	..	..	0 9 0 „	1 1	..	1 1	
727	Gorton, P.	„	..	..	0 9 0 „	1 1	..	1 1	
728	Coughlan, R.	„	..	..	0 9 0 „	1 1	..	1 1	
729	Metcalf, G. J.	„	..	..	0 9 0 „	1 1	..	1 1	
730	Sullivan, N. J.	„	..	..	0 9 0 „	1 1	..	1 1	
731	Crowther, W.	„	..	..	0 9 0 „	1 0	..	1 0	
732	Moncur, A. F.	„	..	..	0 9 0 „	1 0	..	1 0	
733	Price, H. M.	„	..	..	0 9 0 „	1 0	..	1 0	
734	Linton, S. H. A.	„	..	..	0 9 0 „	1 0	..	1 0	
735	Connolly, W. P.	„	..	..	0 9 0 „	1 0	..	1 0	
736	Sharp, T.	„	..	..	0 9 0 „	1 0	0 2	1 2	
737	Hoare, W. E.	„	..	..	0 9 0 „	1 0	..	1 0	
738	Ward, N. W.	„	..	..	0 9 0 „	1 0	..	1 0	
739	Kemp, W. E.	„	..	..	0 9 0 „	1 0	..	1 0	
740	Clark, C.	„	..	..	0 9 0 „	1 0	..	1 0	
741	Hey, H. H.	„	..	..	0 9 0 „	1 0	..	1 0	
742	Quinn, W. J.	„	..	..	0 9 0 „	1 0	..	1 0	
743	Wadman, H. W.	„	..	..	0 9 0 „	1 0	..	1 0	
744	Bateman, R. C.	„	..	..	0 9 0 „	1 0	..	1 0	
745	Steven, J. J.	„	..	..	0 9 0 „	1 0	..	1 0	
746	Wignall, L.	„	..	..	0 9 0 „	1 0	..	1 0	
747	Underwood, T. A.	„	..	..	0 9 0 „	1 0	..	1 0	
748	McQuillan, H.	„	..	..	0 9 0 „	6 9	..	6 9	
749	McMillan, H. L.	„	..	..	0 9 0 „	6 0	..	6 0	
750	Scanlan, T.	„	..	..	0 9 0 „	5 11	..	5 11	
751	Foley, W.	„	..	..	0 9 0 „	5 11	..	5 11	
752	Hayton, T. E.	„	..	..	0 9 0 „	5 10	..	5 10	

RAILWAY DEPARTMENT CLASSIFICATION, 1913—*continued.*

Prog. No.	Name.	Classification.				Service			Remarks.
		Designation.	Subclass.	Grade.	Rate of Pay.	Since last appointed.	Prior to Date last appointed.	For Superannuation Purposes.	

SECOND DIVISION—*continued.*

Class 1: Traffic and Stores—continued.

Prog. No.	Name.	Designation.	Subclass.	Grade.	Rate of Pay.	Since last appointed.	Prior to Date last appointed.	For Superannuation Purposes.	Remarks.
					£ s. d.	Y. M.	Y. M.	Y. M.	
753	Merson, F. A.	Porter	..	..	0 9 0 per diem	5 10	..	5 10	
754	Highet, J. W.	Labourer (Stores)	..	..	0 9 0 „	5 8	..	5 8	
755	Thomas, J. H. H.	Porter	..	..	0 9 0 „	5 8	..	5 8	
756	Beehre, W. H. P.	„	..	..	0 9 0 „	5 5	..	5 5	
757	Brabyn, R. G.	„	..	..	0 9 0 „	5 5	..	5 5	
758	Fitness, J.	„	..	..	0 9 0 „	5 4	..	5 4	
759	Knight, S.	„	..	..	0 9 0 „	5 3	0 6	5 9	
760	Kemp, R.	„	..	..	0 9 0 „	5 3	..	5 3	
761	Clark, S. G.	„	..	..	0 9 0 „	5 2	..	5 2	
762	Tapsell, R. R.	„	..	..	0 9 0 „	5 1	..	5 1	
763	Mullis, W. W.	„	..	..	0 9 0 „	1 0	..	1 0	
764	Docherty, C. C.	„	..	..	0 9 0 „	1 0	..	1 0	
765	Bovill, S. S.	„	..	..	0 9 0 „	1 0	1 10	1 0	
766	Burroughs, V. J.	„	..	..	0 9 0 „	1 0	..	1 0	
767	Harding, C. H.	„	..	..	0 9 0 „	1 0	..	1 0	
768	Goldup, F.	„	..	..	0 9 0 „	1 0	..	1 0	
769	Austin, A. G.	„	..	..	0 9 0 „	5 0	..	5 0	
770	Affleck, H. M.	„	..	..	0 9 0 „	1 0	0 4	1 0	
771	Murray, W. J.	„	..	..	0 9 0 „	1 0	..	1 0	
772	Barris, W.	„	..	..	0 9 0 „	4 11	..	4 11	
773	Youngson, J.	„	..	..	0 9 0 „	0 11	..	0 11	
774	Morrow, T. J.	„	..	..	0 9 0 „	0 11	..	0 11	
775	O'Sullivan, J.	„	..	..	0 9 0 „	0 11	5 5	0 11	
776	Thompson, J.	„	..	..	0 9 0 „	0 11	0 2	0 11	
777	Barzey, H.	„	..	..	0 9 0 „	0 11	..	0 11	
778	Hilliard, R. A.	„	..	..	0 9 0 „	0 11	0 3	0 11	
779	Metrick, J. H. D.	„	..	..	0 9 0 „	0 11	..	0 11	
780	King, A. H.	„	..	..	0 9 0 „	0 11	..	0 11	
781	McDonald, J. F.	„	..	..	0 9 0 „	0 11	..	0 11	
782	Smith, B. H.	„	..	..	0 9 0 „	0 11	..	0 11	
783	Johnston, William	„	..	..	0 9 0 „	0 11	..	0 11	
784	Cormack, A.	„	..	..	0 9 0 „	0 11	..	0 11	
785	Barton, T. H.	„	..	..	0 9 0 „	0 11	..	0 11	
786	Gilson, T. L.	„	..	..	0 9 0 „	0 11	..	0 11	
787	Hall, P. F.	„	..	..	0 9 0 „	0 11	0 3	0 11	
788	Hepburn, H. E.	„	..	..	0 9 0 „	0 11	..	0 11	
789	Arrowsmith, W.	„	..	..	0 9 0 „	0 11	0 3	0 11	
790	Westwood, G. E. B.	„	..	..	0 9 0 „	0 11	..	0 11	
791	Cawood, L. W. J.	„	..	..	0 9 0 „	0 11	..	0 11	
792	Barnes, F. G.	„	..	..	0 9 0 „	0 11	..	0 11	
793	Walton, R. J.	„	..	..	0 9 0 „	0 11	..	0 11	
794	King, P. W.	„	..	..	0 9 0 „	0 11	0 2	1 1	
795	Morris, D. O.	„	..	..	0 9 0 „	0 11	0 1	1 0	
796	Martin, G.	„ (Wellington)	..	..	0 9 0 „	0 11	..	0 11	
797	Breen, E.	„	..	..	0 9 0 „	0 11	..	0 11	
798	Marr, R. M.	„	..	..	0 9 0 „	0 11	..	0 11	
799	Johanson, A. J.	„	..	..	0 9 0 „	0 10	..	0 10	
800	Sturgess, F. W.	„	..	..	0 9 0 „	4 10	..	4 10	
801	McFarlane, T.	„	..	..	0 9 0 „	4 10	..	4 10	
802	Colledge, A. M.	„	..	..	0 9 0 „	0 10	0 11	0 10	
803	Cotter, W.	„	..	..	0 9 0 „	0 10	..	0 10	
804	McKessar, F.	„	..	..	0 9 0 „	4 10	..	4 10	
805	Sykes, J. W.	„	..	..	0 9 0 „	0 10	..	0 10	
806	Johnston, J. A.	„	..	..	0 9 0 „	0 10	..	0 10	
807	Gee, R. H. S.	„	..	..	0 9 0 „	0 10	..	0 10	
808	Bond, R. A.	„	..	..	0 9 0 „	0 10	..	0 10	
809	Cowen, J. G.	„	..	..	0 9 0 „	0 10	..	0 10	
810	Winstanley, P.	„	..	..	0 9 0 „	0 10	0 2	0 10	
811	Oldridge, D. F.	„	..	..	0 9 0 „	0 10	..	0 10	
812	Eden, J. A.	„	..	..	0 9 0 „	0 10	..	0 10	
813	Fowler, L. A.	„	..	..	0 9 0 „	0 10	..	0 10	
814	Philpott, H. M.	„	..	..	0 9 0 „	0 10	..	0 10	
815	Fisher, J. T.	„	..	..	0 9 0 „	4 10	0 2	5 0	
816	Homann, F. E.	„	..	..	0 9 0 „	4 10	..	4 10	
817	Gibb, J. M. B.	„	..	..	0 9 0 „	0 10	..	0 10	
818	Mackenzie, A.	„	..	..	0 9 0 „	0 10	..	0 10	
819	Wylie, O. A.	„	..	..	0 9 0 „	4 10	..	4 10	
820	Bromley, W.	„	..	..	0 9 0 „	0 10	0 3	0 10	
821	Norton, J. W.	„	..	..	0 9 0 „	0 10	..	0 10	
822	McGillion, M. T.	„	..	..	0 9 0 „	0 10	..	0 10	
823	Windsor, W. S. J.	„	..	..	0 9 0 „	0 10	0 2	0 10	
824	Tait, A. R.	„	..	..	0 9 0 „	0 10	..	0 10	
825	Le Comte, J. P. D.	„	..	..	0 9 0 „	5 9	..	5 9	
826	Bruce, W.	„	..	..	0 9 0 „	0 9	..	0 9	
827	Johnsen, C. S.	„	..	..	0 9 0 „	0 9	..	0 9	
828	Rizzi, G.	„	..	..	0 9 0 „	0 9	..	0 9	
829	Ryan, J.	Labourer (Stores, Wgtn.)	..	..	0 9 0 „	0 9	0 3	1 0	

RAILWAY DEPARTMENT CLASSIFICATION, 1913—*continued*.

Prog. No.	Name.	Classification.				Service			Remarks
		Designation.	Subclass.	Grade.	Rate of Pay.	Since last appointed.	Prior to Date last appointed.	For Superannuation Purposes.	
		SECOND DIVISION—*continued*. *Class 1: Traffic and Stores*—continued.							
					£ s. d.	Y. M.	Y. M.	Y. M.	
830	Stevens, J.	Porter	..	..	0 9 0 per diem	0 9	..	0 9	
831	Martin, G.	„ (Dunedin)	..	..	0 9 0 „	0 9	..	0 9	
832	Anderson, E. P.	„	..	..	0 9 0 „	0 9	..	0 9	
833	Flett, J.	„	..	..	0 9 0 „	0 9	0 2	0 9	
834	True, A.	„	..	..	0 9 0 „	0 9	0 2	0 9	
835	Vaughan, S. W.	„	..	..	0 9 0 „	0 9	..	0 9	
836	Thurston, E. W.	„	..	..	0 9 0 „	0 9	..	0 9	
837	Johnson, J. C.	„	..	..	0 9 0 „	0 9	0 1	0 9	
838	White, P.	„	..	..	0 9 0 „	0 9	..	0 9	
839	Lindsay, J. B.	„	..	..	0 9 0 „	0 9	0 5	0 9	
840	George, E. W.	„	..	..	0 9 0 „	0 9	..	0 9	
841	Webb, H. S.	„	..	..	0 9 0 „	4 9	..	4 9	
842	Wilson, A.	„	..	..	0 9 0 „	0 9	..	0 9	
843	Milligan, W.	„	..	..	0 9 0 „	0 9	..	0 9	
844	Barker, W. E.	„	..	..	0 9 0 „	0 9	..	0 9	
845	Hocking, W. G. S.	„	..	..	0 9 0 „	0 9	..	0 9	
846	Williams, A. F.	„	..	..	0 9 0 „	4 9	..	4 9	
847	Hope, A.	„	..	..	0 9 0 „	0 9	..	0 9	
848	O'Connor, T.	„	..	..	0 9 0 „	0 9	0 3	0 9	
849	Bennett, J. E.	„	..	..	0 9 0 „	0 9	..	0 9	
850	Gobby, G.	„	..	..	0 9 0 „	0 9	..	0 9	
851	Crossen, M.	„	..	..	0 9 0 „	0 9	0 4	1 1	
852	Weston, W. J.	„	..	..	0 9 0 „	0 9	..	0 9	
853	Sheehan, W. J.	„	..	..	0 9 0 „	0 9	..	0 9	
854	Keyes, W.	„	..	..	0 9 0 „	0 9	..	0 9	
855	Manderson, C. W.	„	..	..	0 9 0 „	0 9	..	0 9	
856	Denham, J. R.	„	..	..	0 9 0 „	0 9	..	0 9	
857	Campbell, M.	„	..	..	0 9 0 „	0 9	..	0 9	
858	McGill, J.	„	..	..	0 9 0 „	0 9	..	0 9	
859	Meadowcroft, E. H.	„	..	..	0 9 0 „	0 8	..	0 8	
860	Woodrow, R.	„	..	..	0 9 0 „	0 8	..	0 8	
861	Blanche, W. H.	„	..	..	0 9 0 „	0 8	0 1	0 9	
862	Henderson, H. W.	„	..	..	0 9 0 „	0 8	2 6	0 8	
863	Wood, T.	„	..	..	0 9 0 „	0 8	0 3	0 8	
864	Stevenson, E. S.	„	..	..	0 9 0 „	0 8	0 3	0 8	
865	Frost, S. J.	„	..	..	0 9 0 „	4 8	..	4 8	
866	Bamford, E.	„	..	..	0 9 0 „	0 8	..	0 8	
867	Nicholls, T.	„	..	..	0 9 0 „	0 8	..	0 8	
868	Faith, H. W.	„	..	..	0 9 0 „	0 8	..	0 8	
869	Cahill, G.	„	..	..	0 9 0 „	0 8	..	0 8	
870	Murray, W. J.	„	..	..	0 9 0 „	0 8	..	0 8	
871	Blaikie, A. J.	„	..	..	0 9 0 „	0 8	..	0 8	
872	Bews, R.	„	..	..	0 9 0 „	0 8	..	0 8	
873	Pink, H. F.	„	..	..	0 9 0 „	0 8	..	0 8	
874	Shand, R.	„	..	..	0 9 0 „	0 8	..	0 8	
875	Filmer, E. J.	„	..	..	0 9 0 „	0 8	..	0 8	
876	Muller, A. E.	„	..	..	0 9 0 „	0 8	..	0 8	
877	Stevenson, W. O.	„	..	..	0 9 0 „	0 8	..	0 8	
878	Benton, J.	„	..	..	0 9 0 „	0 8	..	0 8	
879	Morrow, W. J.	„	..	..	0 9 0 „	0 8	..	0 8	
880	Duncan, W.	„	..	..	0 9 0 „	0 8	..	0 8	
881	Blake, A. J.	„	..	..	0 9 0 „	0 8	..	0 8	
882	Russell, W.	„	..	..	0 9 0 „	0 8	0 4	1 0	
883	Gray, D.	„	..	..	0 9 0 „	0 8	..	0 8	
884	Adams, F. W. T.	„	..	..	0 9 0 „	0 8	..	0 8	
885	McLeary, J. D. V.	„	..	..	0 9 0 „	0 8	0 1	0 9	
886	McCarthy, D.	„	..	..	0 9 0 „	0 8	..	0 8	
887	Gubbins, A. E.	„	..	..	0 9 0 „	0 8	0 2	0 8	
888	Ramskill, W.	„	..	..	0 9 0 „	0 8	0 3	0 11	
889	Watkins, J. T.	„	..	..	0 9 0 „	0 8	..	0 8	
890	Rodgers, P. J.	„	..	..	0 9 0 „	0 8	..	0 8	
891	Russell, J. A.	„	..	..	0 9 0 „	0 8	8 8	0 8	
892	Lister, R. L.	„	..	..	0 9 0 „	0 8	..	0 8	
893	Mitchell, R. T.	„	..	..	0 9 0 „	0 8	..	0 8	
894	Murdie, J. S.	„	..	..	0 9 0 „	0 7	0 2	0 7	
895	O'Brien, P.	„	..	..	0 9 0 „	0 7	..	0 7	
896	Simpson, R.	„	..	..	0 9 0 „	0 7	0 1	0 8	
897	Coad, P.	„	..	..	0 9 0 „	0 7	0 1	0 8	
898	Ryan, W. G.	„	..	..	0 9 0 „	0 7	..	0 7	
899	Gillon, W.	„	..	..	0 9 0 „	0 7	..	0 7	
900	Lester, J.	„	..	..	0 9 0 „	0 7	..	0 7	
901	House, W.	„	..	..	0 9 0 „	0 7	..	0 7	
902	Durham, J.	„	..	..	0 9 0 „	0 7	..	0 7	
903	Round, A.	„	..	..	0 9 0 „	0 7	..	0 7	
904	Fitzgerald, G. P.	„	..	..	0 9 0 „	0 7	..	0 7	
905	Paull, C. H.	„	..	..	0 9 0 „	0 7	0 4	0 7	
906	Leeden, A. G.	„	..	..	0 9 0 „	0 7	0 2	0 7	

RAILWAY DEPARTMENT CLASSIFICATION, 1913—*continued.*

SECOND DIVISION—*continued.*

Class 1.: Traffic and Stores—continued.

Prog. No.	Name.	Classification.				Service			Remarks.
		Designation.	Subclass.	Grade.	Rate of Pay.	Since last appointed.	Prior to Date last appointed.	For Superannuation Purposes.	
					£ s. d.	Y. M.	Y. M.	Y. M.	
907	Pope, F. J.	Porter	..	..	0 9 0 per diem	0 7	1 2	0 7	
908	Gutnrie, L. B.	″	..	..	0 9 0 ″	0 7	..	0 7	
909	Tunnicliff, J. G.	″	..	..	0 9 0 ″	0 7	..	0 7	
910	Barron, J. A.	″	..	..	0 9 0 ″	0 7	0 3	0 10	
911	Kearney, E.	″	..	..	0 9 0 ″	0 7	..	0 7	
912	Hazlett, H. H.	″	..	..	0 9 0 ″	0 7	..	0 7	
913	West, P. N.	″	..	..	0 9 0 ″	0 7	0 2	0 7	
914	Gust, J. A.	″	..	..	0 9 0 ″	0 7	..	0 7	
915	Anderson, J. H.	″	..	..	0 9 0 ″	0 7	0 2	0 7	
916	Fennessey, P.	″	..	..	0 9 0 ″	0 7	..	0 7	
917	Page, T. W.	″	..	..	0 9 0 ″	0 7	0 10	0 7	
918	Elderton, F.	″	..	..	0 9 0 ″	0 7	..	0 7	
919	Frank, J. F.	″	..	..	0 9 0 ″	0 7	2 4	0 7	
920	Kinloch, T.	″	..	..	0 9 0 ″	0 7	..	0 7	
921	Wilson, R. H.	″	..	..	0 9 0 ″	0 7	..	0 7	
922	Brophy, J.	″	..	..	0 9 0 ″	0 7	..	0 7	
923	Simpson, W.	″	..	..	0 9 0 ″	0 7	..	0 7	
924	Agnew, M.	″	..	..	0 9 0 ″	0 7	..	0 7	
925	Sanders, J. M.	″	..	..	0 9 0 ″	0 6	..	0 6	
926	McLaren, G.	″	..	..	0 9 0 ″	0 6	..	0 6	
927	Belsten, A. V.	″	..	..	0 9 0 ″	0 6	..	0 6	
928	Sharples, H.	″	..	..	0 9 0 ″	0 6	0 3	0 9	
929	Mott, W. F.	″	..	..	0 9 0 ″	0 6	0 3	0 6	
930	Radford, C. H.	″	..	..	0 9 0 ″	0 6	..	0 6	
931	Hughes, W.	″	..	..	0 9 0 ″	0 6	..	0 6	
932	Adams, H. G.	″ (Lyttelton)	..	..	0 9 0 ″	0 6	..	0 6	
933	Elwell, J.	″	..	..	0 9 0 ″	0 6	0 2	0 6	
934	Verdon, E. S.	″	..	..	0 9 0 ″	0 6	1 8	0 6	
935	Chapman, E. W. S.	″	..	..	0 9 0 ″	4 6	..	4 6	
936	Lythgoe, J.	″	..	..	0 9 0 ″	0 6	..	0 6	
937	Ingram, E.	″	..	..	0 9 0 ″	0 6	..	0 6	
938	Fletcher, W.	″	..	..	0 9 0 ″	0 6	..	0 6	
939	Cayford, B.	″	..	..	0 9 0 ″	0 6	..	0 6	
940	Copeland, F.	″	..	..	0 9 0 ″	0 6	0 2	0 6	
941	Fricker, R. A.	″	..	..	0 9 0 ″	0 6	..	0 6	
942	Walker, W. A.	″	..	..	0 9 0 ″	0 6	7 2	0 6	
943	Tomlin, L.	″	..	..	0 9 0 ″	0 6	..	0 6	
944	Beer, G. F.	″	..	..	0 9 0 ″	0 6	..	0 6	
945	Burwell, E. P.	″	..	..	0 9 0 ″	0 6	0 1	0 6	
946	Simpson, W. S.	″	..	..	0 9 0 ″	0 6	0 3	0 9	
947	McCarthy, L. R. S.	″	..	..	0 9 0 ″	4 6	..	4 6	
948	Donn, A. M.	″	..	..	0 9 0 ″	0 6	..	0 6	
949	O'Connor, E. J.	″	..	..	0 9 0 ″	0 6	..	0 6	
950	Prince, J.	″	..	..	0 9 0 ″	0 6	..	0 6	
951	Nisbet, W. E.	″	..	..	0 9 0 ″	0 6	..	0 6	
952	Kilmister, G. T.	″	..	..	0 9 0 ″	0 6	..	0 6	
953	Nisbet, A. E.	″	..	..	0 9 0 ″	0 6	..	0 6	
954	Doyle, M.	″	..	..	0 9 0 ″	0 6	0 6	0 6	
955	Jackson, H.	″	..	..	0 9 0 ″	0 6	..	0 6	
956	Sleeman, J.	″	..	..	0 9 0 ″	0 6	..	0 6	
957	Dennehy, J.	″	..	..	0 9 0 ″	0 6	0 1	0 6	
958	Laverty, E.	″	..	..	0 9 0 ″	0 6	1 1	0 6	
959	Barber, W. H.	″	..	..	0 9 0 ″	0 6	0 3	0 6	
960	Dick, J. M.	″	..	..	0 9 0 ″	0 6	0 4	0 6	
961	Smith, R. E.	″	..	..	0 9 0 ″	0 6	..	0 6	
962	Stone, W. M.	″	..	..	0 9 0 ″	0 6	3 0	0 6	
963	Smith, G. H. S.	Labourer (Stores)	..	..	0 9 0 ″	0 6	..	0 6	
964	Drummond, T. L.	Porter	..	..	0 9 0 ″	0 5	6 9	0 5	
965	Russell, A. W.	″	..	..	0 9 0 ″	0 5	0 3	0 5	
966	Scott, R. D.	″	..	..	0 9 0 ″	0 5	0 4	0 5	
967	Delaney, N. L.	″	..	..	0 9 0 ″	4 5	..	4 5	
968	McLeod, J. A.	″	..	..	0 9 0 ″	4 5	..	4 5	
969	Gow, J. A. W.	″	..	..	0 9 0 ″	0 5	0 6	0 5	
970	Mitchell, J.	″	..	..	0 9 0 ″	0 5	0 3	0 5	
971	Bray, H.	″	..	..	0 9 0 ″	0 5	..	0 5	
972	Manderson, C. L.	″	..	..	0 9 0 ″	0 5	0 1	0 5	
973	Reed, J. S.	″	..	..	0 9 0 ″	0 5	..	0 5	
974	Blaylock, W. P.	″	..	..	0 9 0 ″	0 5	0 3	0 5	
975	Brennan, J.	″	..	..	0 9 0 ″	0 5	0 3	0 5	
976	Stewart, R. M.	″	..	..	0 9 0 ″	4 5	..	4 5	
977	Percy, S.	″	..	..	0 9 0 ″	0 5	..	0 5	
978	Searancke, F. W. H.	″	..	..	0 9 0 ″	0 5	..	0 5	
979	Lowe, A. E.	″	..	..	0 9 0 ″	0 5	..	0 5	
980	Jones, H. V.	″	..	..	0 9 0 ″	0 5	..	0 5	
981	Salt, H. F.	″	..	..	0 9 0 ″	0 5	..	0 5	
982	Callan, F. P.	″	..	..	0 9 0 ″	0 5	0 3	0 8	
983	Haycock, S. L.	″	..	..	0 9 0 ″	0 5	..	0 5	

RAILWAY DEPARTMENT CLASSIFICATION, 1913—*continued.*

SECOND DIVISION—*continued.*

Class 1: Traffic and Stores—continued.

Prog. No.	Name.	Classification.				Service			Remarks.
		Designation.	Subclass.	Grade.	Rate of Pay	Since last appointed.	Prior to Date last appointed.	For Superannuation Purposes.	
					£ s. d.	Y. M.	Y. M.	Y. M.	
984	Ladd, W. J.	Porter	..	..	0 9 0 per diem	0 5	..	0 5	
985	Davison, J. E.	„	..	..	0 9 0 „	0 5	0 2	0 5	
986	Bullock, F. J.	„	..	..	0 9 0 „	0 5	0 3	0 8	
987	McGregor, A. J.	„	..	..	0 9 0 „	0 5	4 9	5 2	
988	Whiting, C. J.	„	..	..	0 9 0 „	0 5	..	0 5	
989	Coles, R. C.	„	..	..	0 9 0 „	0 4	..	0 4	
990	Haw, C. E.	„	..	..	0 9 0 „	0 4	0 6	0 4	
991	Harwood, A.	„	..	..	0 9 0 „	0 4	..	0 4	
992	Smith, J.	„ (Timaru)	..	..	0 9 0 „	0 4	0 1	0 4	
993	Thompson, J.	„ (Christchurch)	..	..	0 9 0 „	0 4	..	0 4	
994	Mills, H. J.	„	..	..	0 9 0 „	0 4	..	0 4	
995	Scott, F. S. V.	„	..	..	0 9 0 „	0 4	..	0 4	
996	Hart, L.	„	..	..	0 9 0 „	0 4	1 1	0 4	
997	Knowles, J. H.	„	..	..	0 9 0 „	0 4	..	0 4	
998	Collard, S. W.	„	..	..	0 9 0 „	0 4	..	0 4	
999	Johnston, F. T.	„	..	..	0 9 0 „	0 4	..	0 4	
1000	Kirkwood, J. T.	„	..	..	0 9 0 „	0 4	..	0 4	
1001	Graham, A. W.	„	..	..	0 9 0 „	0 4	..	0 4	
1002	Jacobs, R.	„	..	..	0 9 0 „	0 4	..	0 4	
1003	Heginbotham, W.	„	..	..	0 9 0 „	0 4	..	0 4	
1004	Bolton, W. E.	„	..	..	0 9 0	0 4	0 6	0 4	
1005	Wattam, R. E.	„	..	..	0 9 0 „	4 4	..	4 4	
1006	Trower, A. L.	„	..	..	0 9 0 „	4 4	0 10	4 2	
1007	Hall, J.	„	..	..	0 9 0 „	0 4	..	0 4	
1008	Campbell, J.	„	..	..	0 9 0 „	4 4	..	4 4	
1009	Stubbs, L. A.	„	..	..	0 9 0 „	0 4	..	0 4	
1010	Gillon, R.	„	..	..	0 9 0 „	0 4	..	1 6	
1011	Kennedy, J. F.	„	..	..	0 9 0 „	0 4	..	0 4	
1012	Bowyer, W. I.	„	..	..	0 9 0 „	0 4	..	0 4	
1013	Beaton, R.	„	..	..	0 9 0 „	0 4	..	0 4	
1014	Hailwood, C.	„	..	..	0 9 0 „	4 4	0 1	4 5	
1015	Gentleman, J.	„	..	..	0 9 0 „	0 4	0 1	0 5	
1016	McKoy, C. L. H.	„	..	..	0 9 0 „	0 3	..	0 3	
1017	Russell, J.	„	..	..	0 9 0 „	0 3	..	0 3	
1018	Dale, G. H.	„	..	..	0 9 0 „	0 3	..	0 3	
1019	Williams, R. E.	„	..	..	0 9 0 „	0 3	..	0 3	
1020	Robertson, G. A.	„	..	..	0 9 0 „	0 3	..	0 3	
1021	Williams, G. H.	„	..	..	0 9 0 „	0 3	0 8	0 3	
1022	Cattell, S.	„	..	..	0 9 0 „	0 3	..	0 3	
1023	Glover, W. C.	„	..	..	0 9 0 „	0 3	0 11	0 3	
1024	Taylor, R.	„	..	..	0 9 0 „	0 2	..	0 2	
1025	Taylor, D. C.	„	..	..	0 9 0 „	0 2	..	0 2	
1026	Reeves, F. G.	„	..	..	0 9 0 „	0 2	..	0 2	
1027	Allen, B.	„	..	..	0 9 0 „	4 2	..	4 2	
1028	Ryan, W. H.	Labourer (Stores)	..	..	0 9 0 „	0 2	..	0 2	
1029	Power, W. P.	Porter	..	..	0 9 0 „	0 2	..	0 2	
1030	Claughton, T. A.	„	..	..	0 9 0 „	0 2	..	0 2	
1031	Brown, R. L. T.	„	..	..	0 9 0 „	0 2	..	0 2	
1032	Luxton, J. H.	„	..	..	0 9 0 „	0 2	1 5	0 2	
1033	Rodgers, E. J.	„	..	..	0 9 0 „	0 2	..	0 2	
1034	Matheson, J. A.	„	..	..	0 9 0 „	0 2	0 7	0 2	
1035	Pritchard, A. T.	„	..	..	0 9 0 „	4 2	0 1	4 3	
1036	Cassells, A. M.	„	..	..	0 9 0 „	4 2	..	4 2	
1037	Crocker, F. W.	„	..	..	0 9 0 „	0 2	..	0 2	
1038	Douglas, A. E.	„	..	..	0 9 0 „	0 2	..	0 2	
1039	Glover, A.	„	..	..	0 9 0 „	0 2	0 8	0 2	
1040	Allender, L. M.	„	..	..	0 9 0 „	0 1	..	0 1	
1041	Harrington, J. F.	„	..	..	0 9 0 „	0 1	..	0 1	
1042	Cooper, H. R.	„	..	..	0 9 0 „	0 1	..	0 1	
1043	McPherson, A. C.	„	..	..	0 9 0 „	0 1	..	0 1	
1044	Scanlan, T. H.	„	..	..	0 9 0 „	0 1	..	0 1	
1045	Benfell, H.	„	..	..	0 9 0 „	0 1	..	0 1	
1046	Riggs, E. R.	„	..	..	0 9 0 „	0 1	..	0 1	
1047	Dulihanty, W.	„	..	..	0 9 0 „	0 1	..	0 1	
1048	Clarke, J. F.	„	..	..	0 9 0 „	0 1	..	0 1	
1049	Soar, C. C. R.	„	..	..	0 9 0 „	0 1	..	0 1	
1050	O'Brien, E. T.	„	..	..	0 9 0 „	0 1	..	0 1	
1051	Davis, F. H.	„	..	..	0 9 0 „	0 1	..	0 1	
1052	Torrens, A. E.	„	..	..	0 9 0 „	0 1	..	0 1	
1053	Savage, C.	„	..	..	0 9 0 „	0 1	..	0 1	
1054	Wright, H. E.	„	..	..	0 9 0 „	0 1	..	0 1	
1055	Pillow, F. W.	„	..	..	0 9 0 „	0 1	0 3	0 1	
1056	Burrell, F. L.	„	..	..	0 9 0 „	0 1	..	0 1	
1057	Spencer, F.	„	..	..	0 9 0 „	0 1	..	0 1	
1058	Windus, L.	„	..	..	0 9 0 „	0 1	..	0 1	
1059	Burns, A. C.	„	..	..	0 9 0 „	0 1	..	0 1	
1060	Hyndman, J.	„	..	..	0 9 0 „	0 1	..	0 1	

RAILWAY DEPARTMENT CLASSIFICATION, 1913—*continued.*

SECOND DIVISION—*continued.*

Class 1: Traffic and Stores—continued.

Prog. No.	Name.	Classification.				Service			Remarks.
		Designation.	Subclass.	Grade.	Rate of Pay.	Since last appointed.	Prior to Date last appointed.	For Superannuation Purposes.	
					£ s. d.	Y. M.	Y. M.	Y. M.	
1061	Dodds, J. R.	Porter	..	..	0 9 0 per diem	0 1	..	0 1	
1062	Renwick, G.	,,	..	..	0 9 0 ,,	0 1	..	0 1	
1063	Hassett, E.	,,	..	..	0 9 0 ,,	0 1	..	0 1	
1064	Wilson, J. E.	,,	..	..	0 9 0 ,,	0 1	..	0 1	
1065	Williams, W. E.	,,	..	..	0 9 0 ,,	0 1	..	0 1	
1066	Muirhead, W. G.	,,	..	..	0 9 0 ,,	0 1	..	0 1	
1067	Hignett, A. E.	,,	..	..	0 9 0 ,,	0 1	0 1	0 2	
1068	Smither, G. F.	,,	..	..	0 9 0 ,,	0 1	..	0 1	
1069	Christie, W. W.	,,	..	..	0 9 0 ,,	0 1	..	0 1	
1070	Jackson, A. E.	,,	..	..	0 9 0 ,,	0 1	..	0 1	
1071	Forbes, C. C.	,,	..	..	0 9 0 ,,	0 1	..	0 1	
1072	Simmonds, E. M.	,,	..	..	0 9 0 ,,	0 1	..	0 1	
1073	Forsyth, D. D.	,,	..	..	0 9 0 ,,	0 1	..	0 1	
1074	Parnell, A. J.	,,	..	..	0 9 0 ,,	0 1	0 1	0 1	
1075	Kean, J. A.	,,	..	..	0 9 0 ,,	4 1	0 2	4 3	
1076	Douglas, P. J.	,,	..	..	0 9 0 ,,	0 1	0 7	0 8	
1077	Todd, R. R.	,,	..	..	0 9 0 ,,	16 days	..	16 days	
1078	Henderson, H. M.	,,	..	..	0 9 0 ,,	16 ,,	..	16 ,,	
1079	McConnell, C. D.	,,	..	..	0 9 0 ,,	15 ,,	..	15 ,,	
1080	Walsh, F. R.	,,	..	..	0 9 0 ,,	14 ,,	..	14 ,,	
1081	Key, W. A. R.	,,	..	..	0 9 0 ,,	14 ,,	0 4	14 ,,	
1082	Logan, H. W.	,,	..	..	0 9 0 ,,	14 ,,	..	14 ,,	
1083	Hamilton, A. R.	,,	..	..	0 9 0 ,,	14 ,,	..	14 ,,	
1084	Chapman, H. W.	,,	..	..	0 9 0 ,,	9 ,,	..	0 1	
1085	Arkwright, R. E.	,,	..	..	0 9 0 ,,	7 ,,	..	7 days	
1086	Wilkinson, H. J.	,,	..	..	0 9 0 ,,	7 ,,	2 3	7 ,,	
1087	Curtis, C. F.	,,	..	..	0 9 0 ,,	7 ,,	..	7 ,,	
1088	Reid, F. D.	,,	..	..	0 9 0 ,,	6 ,,	..	6 ,,	
1089	Devine, J.	,,	..	..	0 9 0 ,,	6 ,,	..	6 ,,	
1090	Brown, D. H.	,,	..	..	0 9 0 ,,	5 ,,	..	5 ,,	
1091	Gill, J.	,,	..	..	0 9 0 ,,	4 0	2 5	4 0	
1092	Patton, H. L.	,,	..	..	0 9 0 ,,	4 0	..	4 0	
1093	Cook, S.	,,	..	..	0 9 0 ,,	2 days	..	2 days	
1094	James, C. J.	,,	..	..	0 9 0 ,,	2 ,,	..	2 ,,	
1095	Murrin, M. J.	,,	..	..	0 9 0 ,,	2 ,,	..	2 ,,	
1096	Bosley, A. E.	,,	..	..	0 9 0 ,,	2 ,,	..	2 ,,	
1	Hancock, J.	Junior Porter	..	..	0 8 0 ,,	3 11	..	3 11	
2	McDonald, A. L.	,,	..	..	0 8 0 ,,	3 11	0 6	4 5	
3	Cleave, R. M.	,,	..	..	0 8 0 ,,	3 11	..	3 11	
4	Campbell, G.	,,	..	..	0 8 0 ,,	3 11	..	3 11	
5	Clayton, W. J.	,,	..	..	0 8 0 ,,	3 11	..	3 11	
6	Donaldson, A. A.	,,	..	..	0 8 0 ,,	3 11	..	3 11	
7	Hoff, L. P.	,,	..	..	0 8 0 ,,	3 10	..	3 10	
8	Samson, W.	,,	..	..	0 8 0 ,,	3 10	0 6	4 4	
9	McCarthy, E.	,, (Wellington)	..	..	0 8 0 ,,	3 10	0 1	3 11	
10	Dalton, T. D.	,,	..	..	0 8 0 ,,	3 10	..	3 10	
11	Breen, C. C.	,,	..	..	0 8 0 ,,	3 10	..	3 10	
12	Blacklaws, S. T.	,,	..	..	0 8 0 ,,	3 10	..	3 10	
13	Oliver, A. F.	,,	..	..	0 8 0 ,,	3 10	..	3 10	
14	Harvey, C. J.	,,	..	..	0 8 0 ,,	3 10	..	3 10	
15	Anderson, P. H.	,,	..	..	0 8 0 ,,	3 9	..	3 9	
16	Nerheny, S.	,,	..	..	0 8 0 ,,	3 8	..	3 8	
17	Vaney, W. J. I.	,,	..	..	0 8 0 ,,	3 8	0 2	3 10	
18	Casey, W. P.	,,	..	..	0 8 0 ,,	3 8	0 2	3 10	
19	Gaskin, H. H.	,,	..	..	0 8 0 ,,	3 8	..	3 8	
20	Grant, F. W.	,,	..	..	0 8 0 ,,	3 8	..	3 8	
21	Syme, R. A.	,,	..	..	0 8 0 ,,	3 7	..	3 7	
22	Barry, J. H.	,,	..	..	0 8 0 ,,	3 7	..	3 7	
23	Collins, V. A.	,,	..	..	0 8 0 ,,	3 7	..	3 7	
24	Jervis, J.	,,	..	..	0 8 0 ,,	3 7	..	3 7	
25	Fowler, M. L.	,,	..	..	0 8 0 ,,	3 6	..	3 6	
26	Sinclair, E. M.	,,	..	..	0 8 0 ,,	3 6	..	3 6	
27	Doyle, C. M.	,,	..	..	0 8 0 ,,	3 6	..	3 6	
28	Simpson, W. G.	,,	..	..	0 8 0 ,,	3 6	..	3 6	
29	Cameron, H.	,,	..	..	0 8 0 ,,	3 6	..	3 6	
30	Morisson, L. F.	,,	..	..	0 8 0 ,,	3 6	..	3 6	
31	Stewart, M. A. W.	,,	..	..	0 8 0 ,,	3 5	..	3 5	
32	Allan, M. R.	,,	..	..	0 8 0 ,,	3 5	..	3 5	
33	Hill, C. V.	,,	..	..	0 8 0 ,,	3 5	..	3 5	
34	Masters, C. R.	,,	..	..	0 8 0 ,,	3 5	..	3 5	
35	Crimins, C.	,,	..	..	0 8 0 ,,	3 5	..	3 5	
36	Wilson, J.	,,	..	..	0 8 0 ,,	3 5	..	3 5	
37	Candy, G. H.	,,	..	..	0 8 0 ,,	3 5	..	3 5	
38	Jones, A. E.	,,	..	..	0 8 0 ,,	3 5	..	3 5	
39	Jemison, W. L.	,,	..	..	0 8 0 ,,	3 5	..	3 5	
40	Pickworth, J. W.	,,	..	..	0 8 0 ,,	3 5	..	3 5	

RAILWAY DEPARTMENT CLASSIFICATION, 1913—*continued.*

Prog. No.	Name.	Classification.				Service			Remarks
		Designation.	Subclass.	Grade.	Rate of Pay.	Since last appointed.	Prior to Date last appointed.	For Superannuation Purposes.	
	SECOND DIVISION—*continued.*								
	Class 1: Traffic and Stores—continued.								
					£ s. d.	Y. M.	Y. M.	Y. M.	
41	Hayles, A.	Junior Porter	..	..	0 8 0 per diem	3 5	..	3 5	
42	Wahapu, R. D.	„	..	..	0 8 0 „	3 5	..	3 5	
43	Mitchell, J. B.	„	..	..	0 8 0 „	3 5	..	3 5	
44	Ferguson, R.	„	..	..	0 8 0 „	3 5	..	3 5	
45	Forbes, J. M.	„	..	..	0 8 0 „	3 5	..	3 5	
46	Sloan, T. C.	„	..	..	0 8 0 „	3 5	..	3 5	
47	Kilpatrick, D.	„	..	..	0 8 0 „	3 5	..	3 5	
48	Symes, H. A.	„	..	..	0 8 0 „	3 5	..	3 5	
49	Wildey, E. H.	„	..	..	0 8 0 „	3 4	..	3 4	
50	Cockerell, A. R.	„	..	..	0 8 0 „	3 4	..	3 4	
51	Meek, W. G.	„	..	..	0 8 0 „	3 4	..	3 4	
52	Scott, J. A.	„	..	..	0 8 0 „	3 4	..	3 4	
53	Clark, A. J.	„	..	..	0 8 0 „	3 4	..	3 4	
54	McNulty, J. E.	„	..	..	0 8 0 „	3 4	..	3 4	
55	Wormald, G. H.	„	..	..	0 8 0 „	3 4	..	3 4	
56	McCarthy, J. A.	„	..	..	0 8 0 „	3 4	..	3 4	
57	Hunter, H.	„	..	..	0 8 0 „	3 3	..	3 3	
58	O'Callaghan, J.	„	..	..	0 8 0 „	3 3	..	3 3	
59	Winter, R. G.	„	..	..	0 8 0 „	3 3	..	3 3	
60	Meekin, J.	„	..	..	0 8 0 „	3 3	..	3 3	
61	Smith, J. R.	„	..	..	0 8 0 „	3 6	..	3 6	
62	Hoori, P.	„	..	..	0 8 0 „	3 2	..	3 2	
63	Carruthers, W. T.	„	..	..	0 8 0 „	3 2	..	3 2	
64	Parker, S.	„	..	..	0 8 0 „	3 2	..	3 2	
65	McKubre, J. M.	„	..	..	0 8 0 „	4 4	..	4 4	
66	Good, J. H.	„	..	..	0 8 0 „	3 1	..	3 1	
67	Creed, R.	„	..	..	0 8 0 „	3 1	..	3 1	
68	Hannigan, J. P.	„	..	..	0 8 0 „	3 1	..	3 1	
69	Murray, A. J. S.	„	..	..	0 8 0 „	3 0	..	3 0	
70	Hatch, A.	„	..	..	0 7 0 „	3 0	..	3 0	
71	Hyndman, A.	„	..	..	0 7 0 „	3 0	..	3 0	
72	Hancock, P. R.	„	..	..	0 7 0 „	2 11	..	2 11	
73	Fraser, J. P. H.	„	..	..	0 7 0 „	2 11	..	2 11	
74	Symonds, G. R.	„	..	..	0 7 0 „	2 11	..	2 11	
75	Dunlop, W. T.	„	..	..	0 7 0 „	2 10	..	2 10	
76	Lyons, J.	„	..	..	0 7 0 „	2 10	..	2 10	
77	Mitchell, G. H.	„	..	..	0 7 0 „	2 10	..	2 10	
78	Ralph, J. W. A.	„	..	..	0 7 0 „	2 10	..	2 10	
79	Watson, D.	„	..	..	0 7 0 „	2 10	..	2 10	
80	Harrison, F. W.	„	..	..	0 7 0 „	2 9	..	2 9	
81	Hawkins, J. W.	„	..	..	0 7 0 „	2 9	..	2 9	
82	Budge, J. S.	„	..	..	0 7 0 „	2 9	..	2 9	
83	Jackson, J. E. S.	„	..	..	0 7 0 „	2 9	..	2 9	
84	Wylie, A. H.	„	..	..	0 7 0 „	2 8	..	2 8	
85	Perry, W. A.	„	..	..	0 7 0 „	2 8	..	2 8	
86	Woolford, J. F. H.	„	..	..	0 7 0 „	2 8	..	2 8	
87	McLean, J. M.	„	..	..	0 7 0 „	2 7	..	2 7	
88	Smith, W. B.	„	..	..	0 7 0 „	2 7	..	2 7	
89	Styles, A. H.	„	..	..	0 7 0 „	2 7	..	2 7	
90	Scott, A. N.	„	..	..	0 7 0 „	2 7	..	2 7	
91	Drewery, L. O.	„	..	..	0 7 0 „	2 6	..	2 6	
92	Ashley, A. W.	„	..	..	0 7 0 „	2 6	..	2 6	
93	Newman, A. V.	„	..	..	0 7 0 „	2 5	..	2 5	
94	Tate, A. C.	„	..	..	0 7 0 „	2 5	..	2 5	
95	McMahon, E.	„	..	..	0 7 0 „	2 4	..	2 4	
96	De Lucca, F. L.	„	..	..	0 7 0 „	2 4	..	2 4	
97	Smith, W. O. O.	„	..	..	0 7 0 „	2 8	..	2 8	
98	Stewart, C.	„	..	..	0 7 0 „	2 4	..	2 4	
99	Traill, T. J.	„	..	..	0 7 0 „	2 3	..	2 3	
100	Gambling, E. W.	„	..	..	0 7 0 „	2 2	..	2 2	
101	Cornwall, J. M.	„	..	..	0 7 0 „	2 2	..	2 2	
102	Burke, D. P.	„	..	..	0 7 0 „	2 2	..	2 2	
103	Hooker, H. A.	„	..	..	0 7 0 „	2 2	..	2 2	
104	Hiddlestone, J.	„	..	..	0 7 0 „	2 2	..	2 2	
105	Forde, J. P.	„	..	..	0 7 0 „	2 2	..	2 2	
106	Hamblin, W. J.	„	..	..	0 7 0 „	2 1	..	2 1	
107	Hislop, R.	„	..	..	0 7 0 „	2 1	..	2 1	
108	Jeal, W. S.	„	..	..	0 7 0 „	2 1	..	2 1	
109	Norton, F. J.	„	..	..	0 7 0 „	2 1	..	2 1	
110	McCarthy, J. J.	„	..	..	0 7 0 „	2 1	..	2 1	
111	Dromgool, J. C.	„	..	..	0 7 0 „	2 1	..	2 1	
112	Shirley, H. H. O.	„	..	..	0 7 0 „	2 0	..	2 0	
113	McGettigan, J. E.	„	..	..	0 7 0 „	2 0	..	2 0	
114	Keane, J.	„	..	..	0 7 0 „	2 0	..	2 0	
115	Auton, S. M.	„	..	..	0 6 0 „	2 0	..	2 0	
116	O'Kane, B. A.	„	..	..	0 6 0 „	1 11	..	1 11	

RAILWAY DEPARTMENT CLASSIFICATION, 1913—*continued.*

SECOND DIVISION—*continued.*

Class 1: Traffic and Stores—continued.

Prog. No.	Name.	Classification.				Service			Remarks.
		Designation.	Subclass.	Grade.	Rate of Pay.	Since last appointed.	Prior to Date last appointed.	For Superannuation Purposes.	
					£ s. d.	Y. M.	Y. M.	Y. M.	
117	Hutchins, A. R.	Junior Porter	..	..	0 6 0 per diem	1 11	..	1 11	
118	Douglas, R.	„	..	..	0 6 0 „	1 11	..	1 11	
119	King, F. E.	„	..	..	0 6 0 „	1 11	..	1 11	
120	Cardno, G. A.	„	.	..	0 6 0 „	1 11	..	1 11	
121	Hatwell, F. A. L.	„	..	..	0 6 0 „	1 11	..	1 11	
122	Shore, W. H.	„	..	..	0 6 0 „	1 10	..	1 10	
123	Ingram, J. H.	„	..	..	0 6 0 „	1 10	..	1 10	
124	Lincoln, A. E. H.	„	..	..	0 6 0 „	1 10	..	1 10	
125	Oldham, A. W.	„	..	..	0 6 0 „	1 9	..	1 9	
126	Rowland, J. B.	„	..	..	0 6 0 „	1 9	..	1 9	
127	Barrett, G. C.	„	..	..	0 6 0 „	1 9	..	1 9	
128	Rowse, A.	„	..	..	0 6 0 „	1 9	..	1 9	
129	Burns, J. W.	„	..	..	0 6 0 „	1 8	..	1 8	
130	Turnwald, J. F.	„	..	..	0 6 0 „	1 8	..	1 8	
131	Jenkins, G. A. A.	„	..	..	0 6 0 „	1 8	..	1 8	
132	Foster, J. N.	„	..	..	0 6 0 „	1 7	..	1 7	
133	Quinn, C.	„	..	..	0 6 0 „	1 7	..	1 7	
134	Lloyd, E. L.	„	..	..	0 6 0 „	1 7	..	1 7	
135	Williams, C. F. T.	„	..	..	0 6 0 „	1 7	0 1	1 7	
136	Williams, H. J. T.	„	..	..	0 6 0 „	1 7	0 1	1 7	
137	Bryce, W. M.	„	..	..	0 6 0 „	1 7	..	1 7	
138	O'Connor, P.	„	..	..	0 6 0 „	1 7	..	1 7	
139	Casey, J. D.	„	..	..	0 6 0 „	1 7	..	1 7	
140	Taylor, F. E.	„	..	..	0 6 0 „	1 6	..	1 6	
141	Stanley, W. S. T.	„	..	..	0 6 0 „	1 6	..	1 6	
142	Swensson, S.	Junior Labourer (Stores)	..	..	0 6 0 „	1 6	..	1 6	
143	McMurtrie, D. A.	Junior Porter	..	..	0 6 0 „	1 5	..	1 5	
144	Thomson, W.	„	..	..	0 6 0 „	1 5	..	1 5	
145	Anglim, T.	„	..	..	0 6 0 „	1 5	..	1 5	
146	Ferguson, E. A.	„	..	..	0 6 0 „	1 5	..	1 5	
147	Beer, A. A. G.	Junior Labourer (Stores)	..	..	0 6 0 „	1 5	..	1 5	
148	Churchill, G. A.	Junior Porter	..	..	0 6 0 „	1 5	..	1 5	
149	Robert, G.	„	..	..	0 6 0 „	1 5	..	1 5	
150	McKellar, D. I.	„	..	..	0 6 0 „	1 4	..	1 4	
151	Gillespie, W. J.	„	..	..	0 6 0 „	1 4	..	1 4	
152	Dash, S. H.	„	..	..	0 6 0 „	1 3	..	1 3	
153	Fennessy, P.	„	..	..	0 6 0 „	1 3	..	1 3	
154	Going, J.	„	..	..	0 5 6 „	1 2	..	1 2	
155	Bright, W. N.	„	..	..	0 6 0 „	1 2	..	1 2	
156	Campbell, W. H.	„	..	..	0 6 0 „	1 1	..	1 1	
157	Moran, C. J.	„	..	..	0 6 0 „	1 1	..	1 1	
158	Gallagher, A. W.	„	..	..	0 6 0 „	1 1	..	1 1	
159	Bate, L. F.	„	..	..	0 6 0 „	1 1	..	1 1	
160	Thornton, W.	„	..	..	0 6 0 „	1 0	..	1 0	
161	Peryer, S. M.	„	..	..	0 6 0 „	1 0	..	1 0	
162	Grant, W. W.	„	..	..	0 6 0 „	1 0	..	1 0	
163	Miles, I.	„	..	..	0 6 0 „	1 0	..	1 0	
164	Meehan, T. L.	„	..	..	0 5 6 „	0 11	0 6	0 11	
165	Couling, J.	„	..	..	0 5 6 „	0 11	..	0 11	
166	McKenna, G.	„	..	..	0 5 6 „	0 11	..	0 11	
167	Carson, M.	„	..	..	0 5 6 „	0 11	..	0 11	
168	Bond, R.	„	..	..	0 5 6 „	0 10	..	0 10	
169	Corliss, E. W. S.	„	..	..	0 5 6 „	0 10	..	0 10	
170	Henderson, T. J. F.	„	..	..	0 5 6 „	0 10	..	0 10	
171	Thompson, J.	„	..	..	0 5 6 „	0 10	..	0 10	
172	Taylor, G. W.	„	..	..	0 5 6 „	0 10	..	0 10	
173	Powell, G.	„	..	..	0 5 6 „	0 10	..	0 10	
174	Wilson, A. G. H.	„	..	..	0 5 6 „	0 9	..	0 9	
175	Holt, J. E.	„	..	..	0 5 6 „	0 9	..	0 9	
176	Phillips, H.	„	..	..	0 5 6 „	0 8	..	0 8	
177	Williams, E. F.	„	..	..	0 5 6 „	0 7	..	0 7	
178	Poppelwell, J.	„	..	..	0 5 6 „	0 7	..	0 7	
179	Bell, G. J.	„	..	..	0 5 6 „	0 6	..	0 6	
180	Carleton, W. J.	„	..	..	0 5 6 „	0 6	..	0 6	
181	Harper, J. L. T.	„	..	..	0 5 6 „	0 5	..	0 5	
182	McCarthy, E.	„ (Darfield)	..	..	0 5 6 „	0 5	..	0 5	
183	Bridges, A. G.	„	..	..	0 5 6 „	0 4	..	0 4	
184	Patterson, V. A.	Junior Labourer (Stores)	..	..	0 5 6 „	0 3	..	0 3	
185	Paget, A. W.	Junior Porter	..	..	0 5 6 „	0 3	..	0 3	
186	Piner, E.	„	..	..	0 5 6 „	0 3	..	0 3	
187	Barrett, B.	„	..	..	0 5 6 „	0 2	..	0 2	
188	Swale, W. M.	„	..	..	0 5 6 „	0 1	..	0 1	
189	Wood, E. C.	„	..	..	0 5 6 „	0 1	..	0 1	
190	McGuire, S. R.	„	..	..	0 5 6 „	1 day	..	1 day	
191	Pauling, W. W.	„	..	..	0 5 6 „	1 day	..	1 day	

RAILWAY DEPARTMENT CLASSIFICATION, 1913—*continued.*

SECOND DIVISION—*continued.*

Class 1: Traffic and Stores—continued.

Prog. No.	Name.	Classification: Designation.	Subclass.	Grade.	Rate of Pay	Service: Since last appointed.	Service: Prior to Date last appointed.	Service: For Superannuation Purposes.	Remarks.
					£ s. d.	Y. M.	Y. M.	Y. M.	
1	Reid, J. H. F.	Crane-driver	..	1	0 10 6 per diem	23 1	..	23 1	
2	Mather, C.	„	..	1	0 10 6 „	20 1	1 11	22 0	
3	Thomas, M.	„	..	1	0 10 6 „	31 7	..	31 7	
4	Luzmoor, E.	„	..	1	0 10 6 „	26 10	0 2	26 10	
5	Page, C.	„	..	1	0 10 6 „	22 2	..	22 2	
6	McLean, J. W.	„	..	1	0 10 6 „	11 8	4 1	15 9	
7	Pullman, W. H. W.	„	..	1	0 10 6 „	7 2	8 2	15 4	
8	Skellern, H.	„	..	1	0 10 0 „	6 9	6 4	12 10	
1	Griffin, H. G.	Horse-driver	..	..	0 9 0 „	19 3	2 1	19 8	
2	Ellis, W. B.	„	..	..	0 9 0 „	17 0	..	17 0	
3	Frame, T.	„	..	..	0 9 0 „	22 6	..	22 6	
4	Andrews, J.	„	..	..	0 9 0 „	22 1	..	22 1	
5	Powley, R.	„	..	..	0 9 0 „	13 11	0 2	14 1	
6	Nelson, J. T.	„	..	..	0 9 0 „	11 3	..	11 3	
7	Mitchell, D.	„	..	..	0 9 0 „	7 9	..	7 9	
8	Joblin, F. E.	„	..	..	0 9 0 „	0 11	..	0 11	
1	Howard, S.	Chief Messenger	..	..	0 10 0 „	21 4	9 7	21 4	
2	Cronin, M.	Messenger	..	..	0 8 6 „	33 0	..	33 0	
3	Addison, T.	Nightwatchman	..	..	2 8 0 per week	33 11	..	33 11	
4	Innes, D.	„	..	..	2 8 0 „	30 4	0 6	30 10	
5	Hartnett, T.	„	..	..	2 8 0 „	29 4	..	29 4	
6	Homann, J. F. A.	„	..	..	2 8 0 „	26 1	..	26 1	
7	Crawford, R.	„	..	..	2 8 0 „	26 11	..	26 11	
8	McGarry, D.	„	..	..	2 8 0 „	26 10	..	26 10	
9	Webb, T.	„	..	..	2 8 0 „	26 8	..	26 8	
10	Vance, J.	„	..	..	2 8 0 „	22 6	..	22 6	
11	Stapleton, T.	„	..	..	2 8 0 „	11 0	2 3	..	
12	Skinner, D.	Messenger	..	..	0 9 0 per diem	4 4	21 7	25 11	
13	Thomas, H.	Nightwatchman	..	..	2 8 0 per week	23 8	0 4	24 0	
14	Allan, R. F.	„	..	..	2 8 0 „	22 7	..	22 7	
15	Gouffe, F. A.	Messenger	..	..	0 9 0 per diem	1 day	6 8	6 8	
1	Mullen, R.	Crossing-keeper	..	..	0 7 0 „	37 7	..	37 7	
2	Butcher, E.	„	..	..	0 7 0 „	36 3	..	36 3	
3	Paull, A.	„	..	..	0 7 0 „	34 7	..	34 7	
4	Flood, P.	„	..	..	0 7 0 „	34 1	..	34 1	
5	Cole, A.	„	..	..	0 7 0 „	31 10	..	31 10	
6	Henderson, T.	„	..	..	0 7 0 „	31 3	..	31 3	
7	Grenfell, H.	„	..	..	0 7 0 „	31 1	..	31 1	
8	Walsh, F.	„	..	..	0 7 0 „	30 11	3 8	30 11	
9	Rigby, J. P.	Bridge-keeper	..	..	0 7 0 „	30 10	..	30 10	
10	Payne, W.	Crossing-keeper	..	..	0 7 0 „	29 10	..	29 10	
11	Devery, K.	„	..	..	0 7 0 „	29 4	4 7	29 4	
12	Hampton, W. J.	„	..	..	0 7 0 „	29 2	..	29 2	
13	Hope, J.	„	..	..	0 7 0 „	28 5	..	28 5	
14	Gaze, R.	Bridge-keeper	..	..	0 9 0 „	28 0	..	28 0	Also fireman in charge of steam-pump.
15	Olds, J.	Crossing-keeper	..	..	0 7 0 „	27 7	2 11	30 5	
16	Shelley, J.	„	..	..	0 7 0 „	27 5	..	27 5	
17	Nohar, W.	Lavatory Attendant	..	..	0 7 0 „	27 3	..	27 3	
18	Marsh, R.	Crossing-keeper	..	..	0 7 0 „	27 0	1 5	28 5	
19	Eccles, R.	„	..	..	0 7 0 „	22 11	..	22 11	
20	Creedon, P.	„	..	..	0 7 0 „	22 7	..	22 7	
21	Hannigan, P.	„	..	..	0 7 0 „	22 7	..	22 7	
22	Barnett, J.	„	..	..	0 7 0 „	22 7	..	22 7	
23	Hill, E.	„	..	..	0 7 0 „	22 5	5 8	28 1	
24	Thompson, T.	„	..	..	0 7 0 „	22 1	12 7	34 8	
25	Bennett, W.	„	..	..	0 7 0 „	21 8	1 9	23 5	
26	Burgess, W.	„	..	..	0 7 0 „	19 5	13 1	19 5	
27	Smith, A.	„	..	..	0 7 0 „	17 5	..	17 5	
28	Grant, D.	„	..	..	0 7 0 „	17 1	..	17 1	
29	Timings, T.	Bridge-keeper	..	..	0 7 0 „	12 3	0 4	12 7	
30	Heavey, J.	„	..	..	0 7 0 „	12 0	0 3	12 3	
31	Quick, T.	Crossing-keeper	..	..	0 7 0 „	11 0	17 7	17 0	
32	Norgate, W.	„	..	..	0 7 0 „	10 9	..	..	
33	Cleveland, J.	„	..	..	0 7 0 „	9 9	0 3	10 1	
34	Reddie, A.	Bridge-keeper	..	..	0 7 0 „	8 7	1 4	8 8	
35	Brookland, G.	Crossing-keeper	..	..	0 7 0 „	6 10	3 0	9 5	
36	Jordan, W. R.	„	..	..	0 7 0 „	10 10	..	10 10	
37	Williams, H. B.	„	..	..	0 7 0 „	32 2	..	32 2	
38	Colechin, C. E.	„	..	..	0 7 0 „	19 7	0 10	19 7	
39	List, B.	„	..	..	0 7 0 „	23 5	..	23 5	
40	Power, P.	„	..	..	0 7 0 „	22 0	6 2	28 0	
41	English, R. S.	Lavatory Attendant	..	..	0 7 0 „	28 1	..	28 1	
42	Hannan, E.	Bridge-keeper	..	..	0 7 0 „	19 11	0 10	20 9	

RAILWAY DEPARTMENT CLASSIFICATION, 1913—*continued.*

Prog. No.	Name.	Classification.				Service			Remarks
		Designation.	Subclass.	Grade.	Rate of Pay	Since last appointed.	Prior to Date last appointed.	For Superannuation Purposes.	
	SECOND DIVISION—*continued.*								
	Class 1: Traffic and Stores—continued.								
					£ s. d.	Y. M.	Y. M.	Y. M.	
43	O'Neill, P.	Crossing-keeper	..	..	0 7 2 per diem	8 9	2 0	30 9	
44	Carmichael, T. H. B.	Bridge-keeper	..	..	0 7 0 "	2 0	..	2 0	
45	Lear, E.	Crossing-keeper	..	..	0 7 0 "	8 0	1 0	9 0	
46	Short, C.	"	..	..	0 7 0 "	4 4	1 8	6 0	
1	Mahony, Mrs. K.	Female Waiting-room Attendant	..	..	1 10 0 per week	14 8	..	14 8	
2	Jennings, Mrs. C. H.	Ditto	..	..	1 10 0 "	11 2	..	11 2	
3	Clark, Mrs. M.	"	..	..	1 10 0 "	9 9	..	9 9	
4	Bowling, Mrs. A.	"	..	..	1 10 0 "	5 8	..	5 8	
5	Anderson, Mrs. J. G.	"	..	..	1 10 0 "	5 4	..	5 4	
	Lake Wakatipu Steamer Service.								
1	Robinson, J.	Fireman	..	1	10 10 0 per month	5 0	5 5	10 5	
1	Wright, W.	"	..	2	9 0 0 "	0 7	..	0 7	
2	Malaghan, T. F.	"	..	2	9 0 0 "	4 3	2 1	6 4	
1	Angello, M. A.	Deck hand	..	..	8 10 0 "	5 0	5 5	10 5	
2	Duston, C.	"	..	..	8 0 0 "	1 0	2 1	1 0	
	Hanmer Motor Service.								
1	Ganderton, F. A.	Chauffeur-in-charge	..	..	5 0 0 per week	5 0	0 6	5 6	
1	Kilday, W.	Chauffeur	1	..	0 10 0 per diem	5 0	5 11	10 11	
2	Child, H. C.	"	1	..	0 10 6 "	1 day	5 3	..	
	Class 2: Locomotive.								
1	Firth, B.	Leading Fitter	1	1	0 13 6 per diem	35 8	..	35 8	
2	Jory, R.	"	1	1	0 13 6 "	31 5	0 1	31 5	
3	Haig, W. R.	"	1	1	0 13 6 "	31 4	1 4	31 4	
4	Godfrey, F. A.	"	1	1	0 13 6 "	21 0	..	21 0	
5	Carew, E. E.	"	1	1	0 13 6 "	19 4	4 4	19 4	
6	Farr, E. L.	"	1	1	0 13 6 "	27 0	1 6	27 0	
7	Mackley, J. F.	"	1	1	0 13 6 "	23 7	..	23 7	
8	Kelly, C. G.	"	1	1	0 13 6 "	23 8	..	23 8	
9	Watkins, A. G.	"	1	1	0 13 6 "	31 6	..	31 6	
10	Rodgerson, J.	"	1	1	0 13 6 "	29 1	..	29 1	
11	Wolff, B. A.	"	1	1	0 13 6 "	20 11	..	20 11	
12	Pullin, W. F. G.	"	1	1	0 13 6 "	18 1	7 2	18 1	
13	Thomas, F. H.	"	1	1	0 13 6 "	17 7	5 11	23 9	
14	Rowe, H.	"	1	1	0 13 6 "	20 8	4 2	20 8	
15	Hollis, J.	"	1	1	0 13 6 "	4 4	20 11	25 3	
16	Dalziel, W. M.	"	1	1	0 13 6 "	23 2	..	23 2	
17	Williams, H. M.	"	1	1	0 13 6 "	30 0	..	30 0	
18	McGill, D.	"	1	1	0 13 6 "	25 5	..	25 5	
19	Wardle, R. R.	"	1	1	0 13 6 "	22 10	..	22 10	
20	Edmonds, P. W.	"	1	1	0 13 6 "	11 0	12 9	23 9	
21	Ronayne, J. H.	"	1	1	0 13 6 "	15 7	1 5	15 7	
22	Connor, J.	"	1	1	0 13 0 "	17 6	7 10	17 6	
23	Taylor, A.	"	1	1	0 13 0 "	11 0	12 0	23 0	
24	Sampson, A. D. F.	"	1	1	0 13 0 "	11 0	9 2	20 2	
25	Baird, G. E.	"	1	1	0 13 0 "	11 0	9 0	20 0	
26	Pollock, J.	"	1	1	0 13 0 "	11 0	5 6	16 6	
27	Dickinson, J. H.	"	1	1	0 13 0 "	11 0	5 6	15 9	
28	Hern, W. P.	"	1	1	0 13 0 "	22 10	..	22 10	
1	Prankerd, J. S.	Leading Turner	1	1	0 13 6 "	31 6	..	31 6	
1	Donovan, H. J.	Leading Boilermaker	1	1	0 13 6 "	25 10	..	25 10	
2	Earwaker, C. H.	"	1	1	0 13 6 "	23 4	..	23 4	
3	Deare, G. A.	"	1	1	0 13 6 "	4 4	7 1	11 5	
4	Keegan, M.	"	1	1	0 13 0 "	34 5	..	34 5	
5	Ruddle, W.	"	1	1	0 13 0 "	27 2	..	27 2	
1	Collins, R.	Leading Blacksmith	1	1	0 13 6 "	30 6	..	30 6	
1	Bullock, T. A.	Leading Carpenter	1	1	0 13 6 "	32 2	1 8	32 2	
2	Haydon, R. A.	"	1	1	0 13 6 "	28 6	..	28 6	
3	Titchener, F. H.	"	1	1	0 13 6 "	29 3	..	29 3	
4	Best, C. E.	"	1	1	0 13 6 "	33 0	..	33 0	
5	Merrett, C. T.	"	1	1	0 13 6 "	4 4	4 8	9 0	
6	Turner, R. W.	"	1	1	0 13 6 "	19 1	6 4	19 1	
1	Wilson, T. H.	Leading Patternmaker	1	1	0 13 6 "	32 3	..	32 3	
2	Copley, E. A.	"	1	1	0 13 6 "	10 0	12 5	22 5	

RAILWAY DEPARTMENT CLASSIFICATION, 1913—*continued.*

SECOND DIVISION—*continued.*

Class 2: Locomotive—continued.

Prog. No.	Name.	Classification.				Service			Remarks.
		Designation.	Subclass.	Grade.	Rate of Pay.	Since last appointed.	Prior to Date last appointed.	For Superannuation Purposes.	
					£ s. d.	Y. M.	Y. M.	Y. M.	
1	Hargreaves, T. W.	Leading Painter	1	1	0 13 6 per diem	31 11	..	31 11	
2	McBeath, J.	„	1	1	0 13 6 „	31 2	..	31 2	
3	Moir, D. J.	„	1	1	0 13 6 „	35 10	..	35 10	
4	Head, H. W.	„	1	1	0 13 6 „	18 5	..	18 5	
5	Braid, J.	„	1	1	0 13 6 „	29 8	..	29 8	
1	Cooper, A. H.	Leading Ironmoulder	1	1	0 13 6 „	9 0	2 7	11 7	
2	Collins, E. E.	Leading Moulder (brass and iron)	1	1	0 13 6 „	28 6	..	28 6	
3	Walls, R.	Leading Ironmoulder	1	1	0 13 6 „	17 6	0 4	17 6	
4	Beveridge, T.	„	1	1	0 13 6 „	11 0	1 2	12 2	
1	Thom, W.	Leading Coppersmith	1	1	0 13 6 „	27 0	..	27 0	
1	Warren, J.	Leading Fitter	1	2	0 12 „	11 0	4 0	14 7	
2	Dickson, R. W. J.	„	1	2	0 12 6 „	11 0	6 9	17 9	
3	Richardson, H. H.	„	1	2	0 12 6 „	25 9	..	25 9	
4	Ball, R. H.	„	1	2	0 12 6 „	11 0	5 11	16 11	
5	Graham, C. J.	„	1	2	0 12 6 „	11 0	4 11	15 11	
6	De Vere, L.	„	1	2	0 12 6 „	10 0	6 9	16 9	
7	Buckhurst, E. B.	„	1	2	0 12 6 „	10 0	5 9	15 9	
8	Bartlett, G. B.	„	1	2	0 12 6 „	10 0	5 9	15 9	
9	Amodeo, L. M.	„	1	2	0 12 6 „	16 9	..	16 9	
10	Currie, J.	„	1	2	0 12 6 „	15 8	..	15 8	
11	Walker, A.	„	1	2	0 12 6 „	14 9	..	14 9	
1	Dickinson, T.	Leading Turner	1	2	0 12 6 „	27 1	0 7	27 1	
2	Routledge, J. M.	„	1	2	0 12 6 „	27 2	..	27 2	
3	Handcock, R. A.	„	1	2	0 12 6 „	26 3	..	26 3	
1	Hogg, G.	Leading Boilermaker	1	2	0 12 6 „	20 9	..	20 9	
2	Scott, J.	„	1	2	0 12 6 „	19 8	..	19 8	
3	Smith, A. J. A.	„	1	2	0 12 6 „	27 0	..	27 0	
1	Thomas, J.	Leading Blacksmith	1	2	0 12 6 „	28 9	0 4	28 9	
2	McNaughton, H.	„	1	2	0 12 6 „	21 7	..	21 7	
3	Johnson, G.	„	1	2	0 12 6 „	19 10	6 0	26 4	
4	Barnett, J. S.	„	1	2	0 12 6 „	19 10	9 3	29 8	
5	Slater, C.	„	1	2	0 12 6 „	23 0	..	23 0	
6	Pope, F. J.	„	1	2	0 12 6 „	34 8	2 10	34 8	
1	Taylor, P.	Leading Carpenter	1	2	0 12 6 „	19 4	12 10	19 4	
2	Vincent, E. F.	„	1	2	0 12 6 „	19 2	..	19 2	
3	Lowden, R. B.	„	1	2	0 12 6 „	11 0	11 11	22 11	
4	Stephenson, H.	„	1	2	0 12 6 „	17 2	0 4	17 2	
5	Doolan, F. J.	„	1	2	0 12 6 „	24 1	..	24 1	
6	Taylor, W. J.	„	1	2	0 12 6 „	11 0	11 9	22 9	
1	Burrows, S.	Leading Patternmaker	1	2	0 12 6 „	11 0	4 3	15 3	
1	Gilbert, H. J.	Leading Painter	1	2	0 12 6 „	25 8	1 4	25 8	
2	Bates, W. J.	„	1	2	0 12 6 „	26 11	..	26 11	
3	McKillop, F. A.	„	1	2	0 12 6 „	28 6	..	28 6	
1	Fitzsimons, J.	Leading Brassmoulder	1	2	0 12 6 „	24 9	..	24 9	
2	Hobbs, H.	„	1	2	0 12 6 „	31 6	..	31 6	
3	Knight, W. J.	Leading Steelmoulder	1	2	0 12 6 „	18 9	11 7	18 9	
1	Stewart, J.	Leading Coppersmith	1	2	0 12 6 „	20 0	..	20 0	
2	Firth, R.	„	1	2	0 12 6 „	18 4	8 1	18 4	
3	Turner, F.	„	1	2	0 12 6 „	10 0	6 8	16 8	
1	Yemm, G.	Leading Trimmer	1	2	0 12 0 „	33 1	..	33 1	
2	Beck, A.	„	1	2	0 12 0 „	24 10	..	24 10	
3	Tregear, E. N.	„	1	2	0 12 0 „	11 0	7 0	14 6	
1	Haydon, H.	Leading Sailmaker	1	..	0 12 0 „	2 0	6 11	8 8	
1	Hancock, J.	Leading Machinist (wood)	1	..	0 12 0 „	30 1	..	30 1	
2	Gibson, R. S.	„ (iron)	1	..	0 12 0 „	31 2	..	31 2	
3	Horne, E. B.	„ (wood)	1	..	0 12 0 „	30 7	1 0	30 7	
4	Eaves, J. W.	„ (iron)	1	..	0 12 0 „	23 2	..	23 2	
5	Jury, R. L.	„ (wood)	1	..	0 12 0 „	11 0	5 7	16 7	
6	Leadbeater, J.	„ (iron)	1	..	0 12 0 „	29 7	..	29 7	
7	Hobson, A.	„ „	1	..	0 12 0 „	23 0	..	23 0	
8	Russell, G.	„ „	1	..	0 12 0 „	33 11	..	33 11	
9	Turner, H.	„ „	1	..	0 12 0 „	21 1	..	21 1	
10	Cooke, R. H.	„ (wood)	1	..	0 12 0 „	24 0	..	24 0	

RAILWAY DEPARTMENT CLASSIFICATION, 1913—*continued.*

Prog. No.	Name.	Classification.				Service			Remarks.
		Designation.	Subclass.	Grade.	Rate of Pay	Since last appointed.	Prior to Date last appointed.	For Superannuation Purposes.	
		SECOND DIVISION—*continued.*							
		Class 2: Locomotive—continued.							
					£ s. d.	Y. M.	Y. M.	Y. M.	
1	Hutchings, W. H.	Leading Crane-driver	1	..	0 12 0 per diem	5 0	14 9	19 9	
1	Pepperell, F. E.	Leading Lifter	1	..	0 12 0 „	19 5	..	19 5	
2	Dobbie, J.	„	1	..	0 12 0 „	26 2	..	26 2	
3	Prescott, T.	„	1	..	0 12 0 „	31 11	..	31 11	
4	Levey, J. J.	„	1	..	0 12 0 „	26 1	..	26 1	
5	Foster, H. D.	„	1	..	0 12 0 „	20 7	..	20 7	
6	Seaton, W.	„	1	..	0 12 0 „	16 4	1 5	17 9	
7	Hill, L. W. H.	„	1	..	0 12 0 „	24 3	..	24 3	
8	McMillan, T. C.	„	1	..	0 12 0 „	19 1	0 2	19 1	
9	Norton, F.	„	1	..	0 12 0 „	22 9	..	22 9	
10	Leyland, T. B.	„	1	..	0 12 0 „	28 0	..	28 0	
11	Clark, J. W.	„	1	..	0 12 0 „	23 6	..	23 6	
12	McNeil, J.	Leading Train Examiner	1	..	0 12 0 „	17 4	..	17 4	
13	Timbs, J.	Leading Lifter	1	..	0 12 0 „	13 5	5 10	18 5	
14	Johnston, W.	„	1	..	0 12 0 „	11 0	4 4	14 7	
1	Moffat, J.	Fitter	2	1	0 11 6 „	22 2	8 6	30 8	
2	Hodge, S.	„	2	1	0 11 6 „	26 5	0 2	26 5	
3	Turner, D. S.	„	2	1	0 11 6 „	25 10	..	25 10	
4	Thomson, W. B.	„	2	1	0 11 6 „	21 7	..	21 7	
5	Dougall, P.	„	2	1	0 11 6 „	20 0	0 9	20 0	
6	Champness, C.	„	2	1	0 11 6 „	23 5	..	23 5	
7	Blackmore, J. W.	„	2	1	0 11 6 „	19 11	4 10	19 11	
8	Smith, R. W.	„	2	1	0 11 6 „	32 0	..	32 0	
9	Woledge, H. E.	„	2	1	0 11 6 „	27 4	2 9	27 4	
10	Watson, G. H.	„	2	1	0 11 6 „	26 6	..	26 6	
11	White, A. J.	„	2	1	0 11 6 „	32 6	4 0	32 6	
12	Harrap, E.	„	2	1	0 11 6 „	32 4	..	32 4	
13	McLaren, D.	„	2	1	0 11 6 „	33 1	..	33 1	
14	Greig, J. F.	„	2	1	0 11 6 „	30 11	..	30 11	
15	Hicks, J. H.	„	2	1	0 11 6 „	22 3	..	22 3	
16	Latimer, J.	„	2	1	0 11 6 „	27 11	..	27 11	
17	Kirk, W. E.	„	2	1	0 11 6 „	30 3	..	30 3	
18	Matson, R.	„	2	1	0 11 6 „	19 6	5 5	19 6	
19	Fraser, J. G.	„	2	1	0 11 6 „	11 0	10 6	21 6	
20	Corliss, J.	„	2	1	0 11 6 „	11 0	8 8	17 6	
21	Bull, R.	„	2	1	0 11 6 „	11 0	5 2	16 2	
22	Jackson, R. A.	„	2	1	0 11 6 „	11 0	13 4	15 8	
23	Moloney, M.	„	2	1	0 11 6 „	11 0	7 10	15 7	
24	Parker, A.	„	2	1	0 11 6 „	11 0	4 1	14 8	
25	Murray, T. M.	„	2	1	0 11 6 „	11 0	3 5	14 5	
26	Scott, D.	„	2	1	0 11 6 „	11 0	2 4	13 4	
27	Rees, C. W.	„	2	1	0 11 6 „	26 9	1 10	26 9	
28	Derry, E. C.	„	2	1	0 11 6 „	17 6	6 6	17 6	
29	Hibbert, W. D.	„	2	1	0 11 6 „	11 0	9 0	20 0	
30	Dent, T.	„	2	1	0 11 6 „	17 5	6 8	17 5	
31	McKerrow, A.	„	2	1	0 11 6 „	11 0	12 6	23 6	
32	Wood, A. J.	„	2	1	0 11 6 „	11 0	6 6	17 6	
33	White, A. G. F.	„	2	1	0 11 6 „	11 0	6 9	17 9	
34	Elmes, A.	„	2	1	0 11 6 „	10 0	5 8	15 8	
35	Hogg, R. W.	„	2	1	0 11 6 „	11 0	6 5	17 5	
36	Stewart, A. B.	„	2	1	0 11 6 „	14 8	..	14 8	
37	Russell, A.	„	2	1	0 11 6 „	15 8	..	15 8	
38	O'Neill, W. T.	„	2	1	0 11 6 „	15 7	..	15 7	
39	Slowley, J. M.	„	2	1	0 11 6 „	14 4	..	14 4	
40	Scott, D. A.	„	2	1	0 11 6 „	7 0	8 6	14 8	
41	Slight, G. M.	„	2	1	0 11 6 „	14 10	..	14 10	
42	McCorkindale, H.	„	2	1	0 11 6 „	13 11	..	13 11	
43	Jenkins, C. A.	„	2	1	0 11 6 „	14 4	0 9	15 1	
44	Carter, R. S. M.	„	2	1	0 11 6 „	11 0	5 10	16 10	
45	Hutcheson, J. A.	„	2	1	0 11 6 „	11 0	5 3	14 8	
46	McKenna, T.	„	2	1	0 11 6 „	14 2	..	14 2	
47	Cameron, D.	„	2	1	0 11 6 „	13 1	..	13 1	
48	Palmer, J. W. A.	„	2	1	0 11 6 „	6 0	10 8	16 8	
49	Nalder, F. W.	„	2	1	0 11 6 „	6 0	10 1	16 1	
50	Dods, S. C.	„	2	1	0 11 6 „	6 0	9 9	15 9	
51	Stewart, W.	„	2	1	0 11 6 „	6 0	9 1	15 1	
52	Garner, G. M.	„	2	1	0 11 6 „	6 0	14 3	14 8	
53	Sutton, O. L.	„	2	1	0 11 6 „	6 0	10 4	14 6	
54	Peters, A.	„	2	1	0 11 6 „	6 0	8 4	14 4	
55	Pascoe, H. W. L.	„	2	1	0 11 6 „	6 0	13 10	14 2	
56	Edgar, J. W.	„	2	1	0 11 6 „	6 0	8 2	14 2	
57	Vaughan, A.	„	2	1	0 11 6 „	6 0	7 9	13 9	
58	Hobbs, A. E.	„	2	1	0 11 6 „	6 0	7 6	13 6	
59	Walworth, A. E. P.	„	2	1	0 11 6 „	6 0	7 5	13 5	
60	Morris, J. J.	„	2	1	0 11 6 „	6 0	7 4	13 4	

RAILWAY DEPARTMENT CLASSIFICATION, 1913—*continued.*

SECOND DIVISION—*continued.*

Class 2: Locomotive—continued.

Prog. No.	Name	Classification.				Service			Remarks.
		Designation	Subclass.	Grade.	Rate of Pay.	Since last appointed.	Prior to Date last appointed.	For Superannuation Purposes.	
					£ s. d.	Y. M.	Y. M.	Y. M.	
61	Miller, A. ..	Fitter	2	1	0 11 6 per diem	6 0	7 3	13 3	
62	Radford, W. J.	„	2	1	0 11 6 „	6 0	7 2	13 2	
63	Strawbridge, M. E.	„	2	1	0 11 6 „	6 0	13 0	13 2	
64	Carson, S. ..	„	2	1	0 11 6 „	6 0	7 2	13 2	
65	Hughes, C. O...	„	2	1	0 11 6 „	6 0	7 2	13 2	
66	Bryan, A. W...	„	2	1	0 11 6 „	6 0	7 0	13 0	
67	Lendrum, R. A.	„	2	1	0 11 6 „	6 0	6 9	12 9	
68	McGee, W. L.	„	2	1	0 11 6 „	6 0	6 8	12 8	
69	Hope, A. A. T.	„	2	1	0 11 6 „	6 0	6 6	12 6	
70	Cambourn, E. H.	„	2	1	0 11 6 „	6 0	6 6	12 6	
71	Landells, W. T.	„	2	1	0 11 6 „	6 0	6 6	12 6	
72	Cragg, F. ..	„	2	1	0 11 6 „	6 0	6 4	12 4	
73	Dalley, F. J. ..	„	2	1	0 11 6 „	6 0	6 2	12 2	
74	Downing, A. J.	„	2	1	0 11 6 „	6 0	6 1	12 1	
75	Espersen, M. T.	„	2	1	0 11 6 „	6 0	6 1	12 1	
76	Harman, A. E.	„	2	1	0 11 6 „	6 0	5 11	11 11	
77	McDougall, J.	„	2	1	0 11 6 „	6 0	5 5	11 5	
78	Rigby, E. ..	„	2	1	0 11 6 „	6 0	5 2	11 2	
79	Saunders, J. ..	„	2	1	0 11 6 „	6 0	5 1	11 1	
80	Manihera, E. ..	„	2	1	0 11 6 „	12 10	..	12 10	
81	Andrews, E. W.	„	2	1	0 11 6 „	13 5	..	13 5	
82	Potter, C. H. ..	„	2	1	0 11 6 „	16 11	..	16 11	
83	Sharpe, L. A. ..	„	2	1	0 11 6 „	14 5	..	14 5	
84	Parkes, J. H. ..	„	2	1	0 11 6 „	14 4	..	14 4	
85	Graham, J. B.	„	2	1	0 11 6 „	13 2	..	13 2	
86	Sheridan, J. ..	„	2	1	0 11 6 „	12 11	..	12 11	
87	Schaw, A. H. ..	„	2	1	0 11 6 „	12 9	..	12 9	
88	Fleming, J. L.	„	2	1	0 11 6 „	13 6	..	13 6	
89	Harris, D. S. D.	„	2	1	0 11 6 „	12 9	..	12 9	
90	Orchard, F. A.	„	2	1	0 11 6 „	11 8	..	11 8	
91	Wilson, E. ..	„	2	1	0 11 6 „	11 7	..	11 7	
92	Mitchell, R. J.	„	2	1	0 11 6 „	5 0	5 8	10 8	
93	McDonald, M.	„	2	1	0 11 6 „	5 0	5 7	10 7	
94	Harris, T. ..	„	2	1	0 11 6 „	5 0	5 4	10 4	
95	Humphreys, W.	„	2	1	0 11 6 „	4 4	4 7	8 4	
96	Wood, W. ..	„	2	1	0 11 6 „	4 4	3 8	8 0	
97	Wilson, W. ..	„	2	1	0 11 6 „	4 4	2 5	6 9	
98	Dawson, E. B.	„	2	1	0 11 6 „	4 4	8 3	12 7	
99	Mackenzie, W. B.	„	2	1	0 11 6 „	4 4	0 9	5 1	
100	Bromley, R. J. L.	„	2	1	0 11 6 „	13 4	..	13 4	
101	Shaw, L. E. ..	„	2	1	0 11 6 „	12 5	..	12 5	
102	Brown, C. T. ..	„	2	1	0 11 6 „	12 3	..	12 3	
103	Cunliffe, R F.	„	2	1	0 11 6 „	12 4	..	12 4	
104	Bowes, T. E. ..	„	2	1	0 11 6 „	11 9	..	11 9	
105	Harland, G. ..	„	2	1	0 11 6 „	11 5	..	11 5	
106	Burton, W. D.	„	2	1	0 11 6 „	11 4	..	11 4	
107	Foley, T. P. ..	„	2	1	0 11 6 „	10 10	..	10 10	
108	Reid, T. M. ..	„	2	1	0 11 6 „	11 7	..	11 7	
109	Silverwood, A. C.	„	2	1	0 11 6 „	11 5	..	11 5	
110	Gow, G. D. ..	„	2	1	0 11 6 „	11 9	..	11 9	
111	Kulsch, C. H...	„	2	1	0 11 6 „	10 11	..	10 11	
112	Davidson, J. F.	„	2	1	0 11 6 „	9 11	..	9 11	
113	Dallison, H. W.	„	2	1	0 11 6 „	10 1	..	10 1	
114	Smallbone F. J. E.	„	2	1	0 11 6 „	3 0	8 6	9 11	
115	Bairstow, D. ..	„	2	1	0 11 6 „	3 0	6 10	9 10	
116	Laurie, R. G. ..	„	2	1	0 11 6 „	3 0	6 10	9 10	
117	Aitchison, J. ..	„	2	1	0 11 6 „	3 0	6 8	9 8	
118	Owen, E. E. ..	„	2	1	0 11 6 „	11 0	5 5	16 5	
119	Chaplin, W. H.	„	2	1	0 11 6 „	11 9	..	11 9	
120	Hull, I. ..	„	2	1	0 11 6 „	9 10	..	9 10	
121	McEwan, J. M.	„	2	1	0 11 6 „	9 4	..	9 4	
122	Freed, F. B. ..	„	2	1	0 11 6 „	10 0	..	10 0	
123	Titchener, C. G.	„	2	1	0 11 6 „	9 8	..	9 8	
124	Titchener, W. H.	„	2	1	0 11 6 „	9 6	..	9 6	
125	Evans, J. V. ..	„	2	1	0 11 6 „	9 2	..	9 2	
126	Bargh, A. J. ..	„	2	1	0 11 6 „	9 2	..	9 2	
127	Carrel, V. S. ..	„	2	1	0 11 6 „	9 6	..	9 6	
128	Newman, C. F.	„	2	1	0 11 6 „	8 4	..	8 4	
129	Schofield, E. J.	„	2	1	0 11 0 „	9 0	..	9 0	
130	Sherriff, D. J...	„	2	1	0 11 6 „	9 4	..	9 4	
131	Hastings, N. ..	„	2	1	0 11 6 „	2 0	6 8	8 8	
132	Heron, R. ..	„	2	1	0 11 6 „	2 0	6 3	8 3	
133	Heyward, H. G.	„	2	1	0 11 6 „	2 0	6 5	8 2	
134	Staunton, D. ..	„	2	1	0 11 6 „	2 0	6 1	8 1	
135	Kempton, B. J.	„	2	1	0 11 6 „	2 0	6 1	8 1	
136	Stewart, W. E.	„	2	1	0 11 6 „	2 0	6 0	8 0	
137	Hebley, J. D. H.	„	2	1	0 11 0 „	14 4	..	14 4	

RAILWAY DEPARTMENT CLASSIFICATION, 1913—*continued.*

SECOND DIVISION—*continued.*

Class 2; Locomotive—continued.

Prog. No.	Name.	Classification.				Service			Remarks
		Designation.	Subclass.	Grade.	Rate of Pay.	Since last appointed.	Prior to Date last appointed.	For Superannuation Purposes.	
					£ s. d.	Y. M.	Y. M.	Y. M.	
138	McLean, F. A.	Fitter	2	1	0 11 0 per diem	9 3	..	9 3	
139	Brown, W.	″	2	1	0 11 0 ″	8 7	..	8 7	
140	Maher, J. A.	″	2	1	0 11 0 ″	8 1	..	8 1	
141	McDonnell, F. B.	″	2	1	0 11 0 ″	7 10	..	7 10	
142	Grant, A. H. G.	″	2	1	0 11 0 ″	7 9	..	7 9	
143	Swaney, J. W.	″	2	1	0 11 0 ″	7 9	..	7 9	
144	Lockett, R. L. B.	″	2	1	0 11 0 ″	7 5	..	7 5	
145	Hynes, A. R.	″	2	1	0 11 0 ″	7 5	..	7 5	
146	Schaw, H. J.	″	2	1	0 11 0 ″	7 4	..	7 4	
147	Cargill, C. N.	″	2	1	0 11 0 ″	7 4	..	7 4	
148	Hart, H. E. M.	″	2	1	0 11 0 ″	7 6	..	7 6	
149	Christie, N. C.	″	2	1	0 11 6 ″	1 0	6 11	1 0	
150	Mitchell, L. S.	″	2	1	0 11 6 ″	1 0	6 10	7 10	
151	Findlay, J.	″	2	1	0 11 6 ″	1 0	6 6	1 0	
152	Macpherson, W. L.	″	2	1	0 11 6 ″	1 0	5 11	1 0	
153	Judd, H. E.	″	2	1	0 11 6 ″	1 0	5 11	1 0	
154	Wardell, J.	″	2	1	0 11 6 ″	1 0	5 11	6 11	
155	Broughton, E. A.	″	2	1	0 11 6 ″	1 0	5 9	6 9	
156	Thompson, J.	″	2	1	0 11 0 ″	1 0	5 9	6 9	
157	Newell, F.	″	2	1	0 11 6 ″	1 0	5 11	1 0	
158	Nielsen, N.	″	2	1	0 11 6 ″	1 0	5 8	1 0	
159	Brain, W. J.	″	2	1	0 11 6 ″	1 0	5 7	1 0	
160	Young, R. W. F.	″	2	1	0 11 6 ″	1 0	5 6	1 0	
161	Cameron, J. M.	″	2	1	0 11 6 ″	1 0	5 6	1 0	
162	Wilson, G. R.	″	2	1	0 11 0 ″	6 11	..	6 11	
163	Croucher, F. G.	″	2	1	0 11 0 ″	6 11	..	6 11	
164	Woodrow, T. M.	″	2	1	0 11 0 ″	6 11	..	6 11	
165	Rodgerson, R.	″	2	1	0 11 0 ″	7 5	..	7 5	
166	Henderson, L. A.	″	2	1	0 11 0 ″	6 10	..	6 10	
167	Godfrey, A. T.	″	2	1	0 11 0 ″	6 11	..	6 11	
168	Ray, F. C.	″	2	1	0 11 0 ″	6 6	..	6 6	
169	Thayer, J. P.	″	2	1	0 11 0 ″	7 3	..	7 3	
170	Ruttledge, W. L.	″	2	1	0 10 6 ″	7 7	..	7 7	
171	Gallagher, E. M.	″	2	1	0 10 6 ″	7 5	..	7 5	
172	Valentine, A. E.	″	2	1	0 10 6 ″	4 4	2 6	6 10	
173	Okeby, F. T.	″	2	1	0 10 6 ″	7 4	..	7 4	
174	Brownlee, B. V.	″	2	1	0 10 6 ″	6 6	..	6 6	
175	Varney, F. C. F.	″	2	1	0 10 6 ″	6 10	..	6 10	
176	McLaren, P. M.	″	2	1	0 10 6 ″	6 8	..	6 8	
177	Yemm, A. J. H.	″	2	1	0 10 6 ″	6 11	..	6 11	
178	Latimer, E. R.	″	2	1	0 10 6 ″	6 2	..	6 2	
179	Giblin, J. F. B.	″	2	1	0 10 6 ″	6 1	..	6 1	
180	McFarlane, D. S.	″	2	1	0 10 6 ″	6 2	..	6 2	
181	Bland, S. G.	″	2	1	0 10 6 ″	6 1	..	6 1	
182	Brunetti, P. D.	″	2	1	0 10 6 ″	6 7	..	6 7	
183	Andrews, J.	″	2	1	0 11 6 ″	1 day	6 11	..	
184	Silver, F. M.	″	2	1	0 11 6 ″	1 ″	6 10	..	
185	Boyd, W. E.	″	2	1	0 11 6 ″	1 ″	5 11	..	
186	Davis, J. H. G.	″	2	1	0 11 6 ″	1 ″	6 8	..	
187	Weller, S. L.	″	2	1	0 11 0 ″	1 ″	5 10	..	
188	Carnegie, C. K.	″	2	1	0 11 6 ″	1 ″	6 2	..	
189	Bower, H. A.	″	2	1	0 11 6 ″	1 ″	5 10	..	
190	Herdman, J.	″	2	1	0 11 6 ″	1 ″	5 9	..	
191	McGee, F. N.	″	2	1	0 11 6 ″	1 ″	5 9	..	
192	Torbet, J.	″	2	1	0 11 6 ″	1 ″	6 0	..	
193	Rose, G.	″	2	1	0 11 6 ″	1 ″	5 9	..	
194	McCormack, M.	″	2	1	0 11 6 ″	1 ″	5 7	..	
195	Johnson, W. J.	″	2	1	0 11 6 ″	1 ″	5 7	..	
196	Richardson, W. T.	″	2	1	0 11 6 ″	1 ″	6 0	..	
197	Ensor, A. D.	″	2	1	0 11 0 ″	1 ″	5 6	..	
198	Owen, F. C.	″	2	1	0 11 6 ″	1 ″	5 3	..	
199	Williams, A. W. J.	″	2	1	0 11 6 ″	1 ″	5 3	..	
200	Naylor, J. H. F.	″	2	1	0 11 6 ″	1 ″	5 2	..	
201	Woodward, J.	″	2	1	0 11 6 ″	1 ″	5 1	..	
1	McLaren, P.	Turner	2	1	0 11 6 ″	34 8	..	34 8	
2	Jones, J. H.	″	2	1	0 11 6 ″	31 6	..	31 6	
3	Taylor, E. M.	″	2	1	0 11 6 ″	31 6	..	31 6	
4	Brown, T. M.	″	2	1	0 11 6 ″	30 11	0 7	30 11	
5	Shardlow, W. H.	″	2	1	0 11 6 ″	27 10	..	27 10	
6	Marriott, J. H.	″	2	1	0 11 6 ″	25 10	..	25 10	
7	Withers, J. L.	″	2	1	0 11 6 ″	22 9	..	22 9	
8	Dickinson, W.	″	2	1	0 11 6 ″	22 3	..	22 3	
9	Davies, S.	″	2	1	0 11 6 ″	21 3	7 11	21 3	
10	Mandeno, J. W. T.	″	2	1	0 11 6 ″	18 5	0 3	18 5	
11	Sinclair, D.	″	2	1	0 11 6 ″	24 1	..	24 1	
12	Stephens, F. J.	″	2	1	0 11 6 ″	21 0	7 11	21 0	

SECOND DIVISION—*continued.*

Class 2 : Locomotive—continued.

Prog. No.	Name.	Classification.				Service			Remarks.
		Designation.	Subclass.	Grade.	Rate of Pay.	Since last appointed.	Prior to Date last appointed.	For Superannuation Purposes.	
					£ s. d.	Y. M.	Y. M.	Y. M.	
13	Don, J.	Turner	2	1	0 11 6 per diem	11 0	10 10	21 10	
14	Godber, A. P.	"	2	1	0 11 6 "	11 0	10 6	21 6	
15	O'Shannassy, F. J.	"	2	1	0 11 6 "	11 0	6 9	17 9	
16	Routledge, W. R.	"	2	1	0 11 6 "	11 0	5 10	16 10	
17	Lloyd, J.	"	2	1	0 11 6 "	11 0	3 5	14 5	
18	Hambleton, J. R.	"	2	1	0 11 6 "	11 0	4 7	15 7	
19	Hay, A.	"	2	1	0 11 6 "	11 0	4 7	15 7	
20	Sherwin, G. A.	"	2	1	0 11 6 "	10 0	11 5	21 5	
21	Efford, W. H.	"	2	1	0 11 6 "	10 0	9 8	19 8	
22	Harrison, G. H.	"	2	1	0 11 6 "	11 0	6 3	17 3	
23	Renai, E. L.	"	2	1	0 11 6 "	11 0	5 7	16 7	
24	Bond, A. P.	"	2	1	0 11 6 "	10 0	7 6	17 6	
25	Bennett, H. S.	"	2	1	0 11 6 "	10 0	7 4	17 4	
26	O'Leary, C. J.	"	2	1	0 11 6 "	11 0	6 2	17 2	
27	Armstrong, J.	"	2	1	0 11 6 "	10 0	5 8	15 8	
28	Lawrie, E. H. R.	"	2	1	0 11 6 "	14 8	..	14 8	
29	Newlands, J.	"	2	1	0 11 6 "	14 9	..	14 9	
30	Leyland, W.	"	2	1	0 11 6 "	14 7	..	14 7	
31	McQuillan, J.	"	2	1	0 11 6 "	14 9	..	14 9	
32	Bonifant, F.	"	2	1	0 11 6 "	14 4	..	14 4	
33	Reid, J.	"	2	1	0 11 6 "	7 0	7 5	14 5	
34	Brown, T. V.	"	2	1	0 11 6 "	6 0	8 0	14 0	
35	Flight, J. H.	"	2	1	0 11 6 "	6 0	7 0	13 0	
36	Rappe, H. G.	"	2	1	0 11 6 "	6 0	6 11	12 11	
37	Lawrence, G. E.	"	2	1	0 11 6 "	6 0	6 10	12 10	
38	Davies, J.	"	2	1	0 11 6 "	6 0	6 8	12 8	
39	Signal, S.	"	2	1	0 11 6 "	6 0	6 5	12 5	
40	Walker, J.	"	2	1	0 11 6 "	6 0	6 4	12 4	
41	Strong, C. A.	"	2	1	0 11 6 "	6 0	5 11	11 11	
42	Maylett, A. T.	"	2	1	0 11 6 "	6 0	5 11	11 11	
43	Cocks, H.	"	2	1	0 11 6 "	6 0	5 7	11 7	
44	Elliot, J.	"	2	1	0 11 6 "	6 0	5 7	11 7	
45	Adams, P. H.	"	2	1	0 11 6 "	6 0	5 0	11 0	
46	Dickinson, E. H.	"	2	1	0 11 6 "	13 8	..	13 8	
47	Bultitude, R. M.	"	2	1	0 11 6 "	13 0	..	13 0	
48	Ferguson, G.	"	2	1	0 11 6 "	12 4	..	12 4	
49	Morrison, A.	"	2	1	0 11 6 "	12 3	..	12 3	
50	Hobson, F. C.	"	2	1	0 11 6 "	12 8	..	12 8	
51	Cummings, J. S.	"	2	1	0 11 6 "	11 9	..	11 9	
52	McIntyre, K. M.	"	2	1	0 11 6 "	11 6	..	11 6	
53	Partridge, F. G.	"	2	1	0 11 6 "	5 0	9 5	14 5	
54	Carrick, J. A.	"	2	1	0 11 6 "	5 0	14 0	10 6	
55	Wallis, F. W.	"	2	1	0 11 6 "	4 4	18 10	23 2	
56	Jensen, S.	"	2	1	0 11 6 "	4 4	3 2	7 6	
57	Wood, H. P.	"	2	1	0 11 6 "	4 4	1 5	5 9	
58	Henry, A.	"	2	1	0 11 6 "	12 8	..	12 8	
59	Reidy, D. B.	"	2	1	0 11 6 "	11 11	..	11 11	
60	Toomey, J. W.	"	2	1	0 11 6 "	11 0	..	11 0	
61	Farr, L.	"	2	1	0 11 6 "	10 3	..	10 3	
62	Sansbury, J. L.	"	2	1	0 11 6 "	9 7	..	9 7	
63	Irvine, J. G.	"	2	1	0 11 6 "	8 11	..	8 11	
64	Wood, H. F.	"	2	1	0 11 0 "	7 6	..	7 6	
65	Scroggs, H. N.	"	2	1	0 11 6 "	1 0	7 1	1 0	
66	Thompson, R. W.	"	2	1	0 11 6 "	1 0	7 2	1 0	
67	McEvoy, W. L.	"	2	1	0 11 6 "	1 0	5 10	1 0	
68	Parsons, D. W.	"	2	1	0 11 6 "	1 0	5 9	6 9	
69	McDonald, A. J.	"	2	1	0 11 6 "	1 0	5 9	6 9	
70	Hall, J. H.	"	2	1	0 11 6 "	1 0	5 6	6 2	
71	Palmer, W.	"	2	1	0 11 6 "	1 0	10 6	1 0	
72	Cameron, W. A. M.	"	2	1	0 10 6 "	6 8	..	6 8	
73	Reid, C. E.	"	2	1	0 10 6 "	6 5	..	6 5	
74	Pilkington, J.	"	2	1	0 11 6 "	1 day	5 9	..	
75	Lucas, C. A.	"	2	1	0 11 6 "	1 "	5 7	..	
1	Byron, H.	Boilermaker	2	1	0 11 6 "	30 4	..	30 4	
2	Arrowsmith, W.	"	2	1	0 11 6 "	23 6	..	25 6	
3	Bode, R.	"	2	1	0 11 6 "	21 7	1 8	21 7	
4	Elliot, R. J.	"	2	1	0 11 6 "	19 11	..	19 11	
5	McGee, S.	"	2	1	0 11 6 "	19 6	..	19 6	
6	O'Brien, J.	"	2	1	0 11 6 "	24 8	..	24 8	
7	Williams, F.	"	2	1	0 11 6 "	24 2	..	24 2	
8	Kirk, H. R.	"	2	1	0 11 6 "	24 0	..	24 0	
9	Stubbs, F.	"	2	1	0 11 6 "	24 1	..	24 1	
10	Ibbertson, Joe	"	2	1	0 11 6 "	26 10	..	26 10	
11	Holmes, A. H.	"	2	1	0 11 6 "	11 0	8 9	19 9	
12	Perry, F. A.	"	2	1	0 11 6 "	11 0	4 4	15 4	
13	Griffiths, A. H.	"	2	1	0 11 6 "	11 0	3 0	13 8	

RAILWAY DEPARTMENT CLASSIFICATION, 1913—*continued.*

SECOND DIVISION—*continued.*

Class 2: Locomotive—continued.

Prog. No.	Name.	Classification.				Service			Remarks.
		Designation.	Subclass.	Grade.	Rate of Pay.	Since last appointed.	Prior to Date last appointed.	For Superannuation Purposes.	
					£ s. d.	Y. M.	Y. M.	Y. M.	
14	McKenzie, J. S. G.	Boilermaker	2	1	0 11 6 per diem	11 0	8 10	12 8	
15	Robbins, W.	„	2	1	0 11 6 „	11 0	0 9	11 9	
16	Moore, J.	„	2	1	0 11 6 „	11 0	5 8	16 8	
17	Armstrong, W. E.	„	2	1	0 11 6 „	11 0	9 0	16 2	
18	Hulbert, H. C.	„	2	1	0 11 6 „	11 0	7 10	18 10	
19	Villars, C. H.	„	2	1	0 11 6 „	11 0	7 2	18 2	
20	Edwards, W. H.	„	2	1	0 11 6 „	11 0	8 7	19 7	
21	Donovan, W. H. J.	„	2	1	0 11 6 „	14 8	0 3	14 8	
22	McGee, T. G.	„	2	1	0 11 6 „	10 0	5 8	14 8	
23	Turner, W. A.	„	2	1	0 11 6 „	6 0	9 6	15 6	
24	Freeborn, W. G.	„	2	1	0 11 6 „	6 0	16 2	15 2	
25	Eason, C. T.	„	2	1	0 11 6 „	6 0	14 8	15 1	
26	Hobbs, F. W.	„	2	1	0 11 6 „	6 0	9 2	14 7	
27	Buckley, G. L.	„	2	1	0 11 6 „	6 0	6 11	12 11	
28	McEwan, N.	„	2	1	0 11 6 „	6 0	6 1	11 1	
29	McNamara, J.	„	2	1	0 11 6 „	8 0	8 6	16 6	
30	Stewart, D.	„	2	1	0 11 6 „	12 5	..	12 5	
31	Turley, J. D.	„	2	1	0 11 6 „	11 9	..	11 9	
32	McLeod, N. J. M.	„	2	1	0 11 6 „	11 5	..	11 5	
33	Moir, J.	„	2	1	0 11 6 „	11 7	..	11 7	
34	Kennedy, W.	„	2	1	0 11 6 „	5 0	5 7	10 7	
35	Hendron, J. J.	„	2	1	0 11 6 „	5 0	7 0	10 5	
36	Cairney, T.	„	2	1	0 11 6 „	5 0	5 2	10 2	
37	Elvines, F.	„	2	1	0 11 6 „	4 4	13 1	17 2	
38	Miller, G. S.	„	2	1	0 11 6 „	4 4	1 8	6 0	
39	Moore, J. D.	„	2	1	0 11 6 „	14 0	..	14 0	
40	Semple, A.	„	2	1	0 11 6 „	13 1	..	13 1	
41	Coard, A. J.	„	2	1	0 11 6 „	13 0	..	13 0	
42	Fisher, W.	„	2	1	0 11 6 „	12 0	..	12 0	
43	Neville, M. W.	„	2	1	0 11 6 „	11 9	..	11 9	
44	M-rcer, D.	„	2	1	0 11 6 „	11 4	..	11 4	
45	Sherlock, J.	„	2	1	0 11 6 „	11 1	..	11 1	
46	Hughes, J. W.	„	2	1	0 11 6 „	3 0	9 6	9 3	
47	Yeoman, W.	„	2	1	0 11 6 „	11 0	4 4	15 4	
48	Upchurch, J. W.	„	2	1	0 11 6 „	11 10	..	11 10	
49	Jurv, R. R.	„	2	1	0 11 6 „	11 0	..	11 0	
50	Rasmusen, A.	„	2	1	0 11 6 „	10 9	..	10 9	
51	Mutton, W. M.	„	2	1	0 11 6 „	10 2	..	10 2	
52	Stephens, W. R.	„	2	1	0 11 6 „	1 0	10 1	7 11	
53	Stuart, M.	„	2	1	0 11 6 „	1 0	6 0	1 0	
54	Hislop, W. J.	„	2	1	0 11 6 „	1 0	13 0	6 9	
55	Davis, T. F.	„	2	1	0 11 6 „	1 0	5 1	6 1	
56	Roberts, H.	„	2	1	0 11 0 „	6 7	..	6 7	
57	Williams, A. J.	„	2	1	0 11 0 „	6 10	..	6 10	
58	Forbes, J. G.	„	2	1	0 11 0 „	6 10	..	6 10	
59	Ryan, W. J.	„	2	1	0 10 6 „	8 0	..	8 0	
60	Arnold, E. J.	„	2	1	0 10 6 „	6 7	..	6 7	
61	Prideaux, W. F.	„	2	1	0 10 6 „	6 6	..	6 6	
62	Ryan, E.	„	2	1	0 10 6 „	6 10	..	6 10	
63	MacLean, T. L.	„	2	1	0 11 6 „	1 day	5 11	..	
64	Thomson, J.	„	2	1	0 11 6 „	1 „	5 11	..	
65	McEwan, T. H.	„	2	1	0 11 6 „	1 „	6 0	..	
1	Parker, T.	Blacksmith	2	1	0 11 6 „	23 11	..	23 11	
2	Pee, J.	„	2	1	0 11 6 „	35 5	..	35 5	
3	Coxon, G. A.	„	2	1	0 11 6 „	29 7	..	29 7	
4	Dowland, E. W.	„	2	1	0 11 6 „	30 7	..	30 7	
5	Holland, G. P.	„	2	1	0 11 6 „	17 1	13 0	17 5	
6	Connor, W.	„	2	1	0 11 6 „	27 0	..	27 0	
7	Farrant, R.	„	2	1	0 11 6 „	36 6	..	36 6	
8	Rodgerson, W. R.	Springmaker	2	1	0 11 6 „	23 6	..	23 6	
9	Scorgie, A. J.	Blacksmith	2	1	0 11 6 „	11 0	11 10	22 10	
10	Terrace, D.	„	2	1	0 11 6 „	11 0	6 4	17 2	
11	Collins, J. G.	„	2	1	0 11 6 „	11 0	5 8	16 8	
12	Usmar, H. A.	„	2	1	0 11 6 „	11 0	4 6	15 6	
13	Williams, R.	„	2	1	0 11 6 „	11 0	4 4	15 4	
14	Milroy, J. W.	„	2	1	0 11 6 „	11 0	2 10	13 10	
15	Hobbs, G. A.	Springmaker	2	1	0 11 6 „	11 0	9 10	20 10	
16	Carey, N. P. T.	Blacksmith	2	1	0 11 6 „	11 0	8 5	19 5	
17	Smith, W. S.	„	2	1	0 11 6 „	11 0	7 11	18 11	
18	Couchman, F. W.	„	2	1	0 11 6 „	11 0	6 3	17 3	
19	Pope, P. J.	„	2	1	0 11 6 „	11 0	6 1	17 1	
20	Turnbull, E. J.	„	2	1	0 11 6 „	10 0	5 8	15 8	
21	Hean, R. B.	„	2	1	0 11 6 „	24 1	..	24 1	
22	Linton, J.	„	2	1	0 11 6 „	11 0	6 6	17 6	
23	Jenkins, R. H.	„	2	1	0 11 6 „	11 0	5 5	16 5	
24	Punch, F. W.	„	2	1	0 11 6 „	11 0	4 8	15 8	

Railway Department Classification, 1913—*continued.*

SECOND DIVISION—*continued.*

Class 2 : Locomotive—continued.

Prog. No.	Name.	Classification.				Service			Remarks.
		Designation.	Subclass.	Grade.	Rate of Pay.	Since last appointed.	Prior to Date last appointed.	For Superannuation Purposes.	
					£ s. d.	Y. M.	Y. M.	Y. M.	
25	Hedges, F. A.	Blacksmith	2	1	0 11 6 per diem	11 0	11 9	22 9	
26	Ramsay, W. F.	"	2	1	0 11 6 "	11 0	10 7	21 7	
27	Weir, M. J. R.	"	2	1	0 11 6 "	11 0	6 4	17 4	
28	Harris, G. J.	"	2	1	0 11 6 "	10 0	9 4	19 4	
29	Holland, G. P., jun.	"	2	1	0 11 6 "	10 0	5 10	15 10	
30	Mead, J.	"	2	1	0 11 6 "	7 0	4 0	11 0	
31	Betteridge, W. H.	Springmaker	2	1	0 11 6 "	6 0	15 7	21 7	
32	Dalley, C. T.	Blacksmith	2	1	0 11 6 "	6 0	9 4	14 8	
33	May, J.	"	2	1	0 11 6 "	6 0	9 3	14 8	
34	Grammer, L. H.	"	2	1	0 11 6 "	6 0	17 8	14 7	
35	Bentley, A. J.	"	2	1	0 11 6 "	6 0	8 6	14 6	
36	Eadie, J. R.	"	2	1	0 11 6 "	6 0	14 7	13 10	
37	Austin, A. A.	"	2	1	0 11 6 "	6 0	7 2	13 2	
38	Ahern, J. G.	Springmaker	2	1	0 11 6 "	6 0	7 1	13 1	
39	Allender, H. V.	Blacksmith	2	1	0 11 6 "	6 0	6 2	12 2	
40	Shardlow, H. G.	"	2	1	0 11 6 "	12 6	..	12 6	
41	Dawson, T. A.	Springmaker	2	1	0 11 6 "	11 9	..	11 9	
42	Dunlop, A.	Blacksmith	2	1	0 11 6 "	5 0	5 5	10 5	
43	McIntyre, A. A.	"	2	1	0 11 6 "	5 0	5 2	10 2	
44	Kelly, T. E.	"	2	1	0 11 6 "	5 0	5 1	10 1	
45	Henderson, A.	Springmaker	2	1	0 11 6 "	4 4	15 8	9 1	
46	Hislop, J. P.	Blacksmith	2	1	0 11 6 "	4 4	6 9	10 3	
47	Patterson, E. W.	"	2	1	0 11 6 "	11 5	..	11 5	
48	Thomas, C. J.	"	2	1	0 11 6 "	12 0	..	12 0	
49	Maguire, J. R.	"	2	1	0 11 6 "	11 6	..	11 6	
50	Harrison, W. L.	"	2	1	0 11 6 "	11 2	..	11 2	
51	Dennison, J. S.	"	2	1	0 11 6 "	10 11	..	10 11	
52	Scorgie, D. O.	"	2	1	0 11 6 "	11 4	..	11 4	
53	Harkess, W. H.	Springmaker	2	1	0 11 6 "	8 11	..	8 11	
54	Mulligan, E. J.	Blacksmith	2	1	0 11 0 "	8 3	..	8 3	
55	Coote, P. S.	"	2	1	0 11 0 "	8 1	..	8 1	
56	Manning, C. H.	"	2	1	0 11 6 "	1 0	10 9	6 2	
57	Miller, W. H.	"	2	1	0 11 0 "	6 10	..	6 10	
58	Miles, M. F.	"	2	1	0 11 0 "	6 11	..	6 11	
59	O'Sullivan, L. D.	"	2	1	0 10 6 "	10 1	..	10 1	
60	Ewart, J. H.	"	2	1	0 10 6 "	7 6	..	7 6	
61	Crossen, W.	"	2	1	0 10 6 "	6 9	..	6 9	
62	McGrath, H.	"	2	1	0 10 6 "	6 8	..	6 8	
63	Smyth, A. W.	"	2	1	0 10 6 "	6 4	..	6 4	
64	Hunter, G.	"	2	1	0 11 6 "	1 day	5 11	..	
65	Smith, H. A.	"	2	1	0 11 6 "	1 "	5 9	..	
66	Carter, W. J.	"	2	1	0 11 6 "	1 "	5 9	..	
67	Willett, J.	"	2	1	0 11 6 "	1 "	5 6	..	
68	Ford, F. E.	"	2	1	0 11 6 "	1 "	6 0	..	
1	Smart, G. A.	Carpenter	2	1	0 11 6 "	32 3	3 3	32 3	
2	McKechnie, J.	"	2	1	0 11 6 "	27 10	2 11	27 10	
3	Renai, G.	"	2	1	0 11 6 "	25 8	..	25 8	
4	Davison, J. W.	"	2	1	0 11 6 "	22 5	..	22 5	
5	Vause, J.	"	2	1	0 11 6 "	19 11	0 11	19 11	
6	Johnson, A.	"	2	1	0 11 6 "	31 6	..	31 6	
7	Banks, E.	"	2	1	0 11 6 "	23 10	1 7	23 10	
8	McMeekin, J.	"	2	1	0 11 6 "	17 10	..	17 10	
9	Middlebrook, J. T.	"	2	1	0 11 6 "	28 0	..	28 0	
10	Woodall, A. O.	"	2	1	0 11 6 "	18 10	0 6	18 10	
11	Lipscombe, J.	"	2	1	0 11 6 "	19 4	3 8	23 0	
12	Haines, C. W. G.	"	2	1	0 11 6 "	11 0	11 9	22 9	
13	Gurr, H.	"	2	1	0 11 6 "	11 0	10 4	21 4	
14	Black, W. F. I.	"	2	1	0 11 6 "	11 0	8 10	19 10	
15	Peyman, J.	"	2	1	0 11 6 "	11 0	5 10	16 10	
16	Whitcher, H. T.	"	2	1	0 11 6 "	11 0	8 2	16 9	
17	Donaldson, J. W.	"	2	1	0 11 6 "	11 0	5 2	16 2	
18	Miller, G.	"	2	1	0 11 6 "	11 0	9 6	15 9	
19	McKenzie, C.	"	2	1	0 11 6 "	11 0	5 7	15 9	
20	Yamm, W. J.	"	2	1	0 11 6 "	11 0	12 3	15 8	
21	Railton, G. T.	"	2	1	0 11 6 "	11 0	13 2	15 7	
22	Morrison, R.	"	2	1	0 11 6 "	11 0	5 6	14 8	
23	Wilson, F.	"	2	1	0 11 6 "	11 0	7 2	18 2	
24	Whitburn, J. H.	"	2	1	0 11 6 "	23 9	..	23 9	
25	Jenkins, C.	"	2	1	0 11 6 "	11 0	10 8	21 8	
26	Devan, J. J.	"	2	1	0 11 6 "	10 0	6 11	16 11	
27	Cooper, A.	"	2	1	0 11 6 "	9 8	10 8	20 4	
28	Taylor, A. E.	"	2	1	0 11 6 "	8 0	16 5	17 0	
29	Moore, J.	"	2	1	0 11 6 "	8 0	9 10	15 8	
30	Matheson, A.	"	2	1	0 11 6 "	8 0	14 0	15 8	
31	Mole, H. P.	"	2	1	0 11 6 "	11 0	7 5	18 5	
32	Poll, C. A. W. L.	"	2	1	0 11 6 "	11 0	5 6	15 6	

Railway Department Classification, 1913—*continued.*

Prog. No.	Name.	Classification.				Service			Remarks.
		Designation.	Subclass.	Grade.	Rate of Pay.	Since last appointed.	Prior to Date last appointed.	For Superannuation Purposes.	
					SECOND DIVISION—*continued.*				
					Class 2: Locomotive—continued.				
					£ s. d.	Y. M.	Y. M.	Y. M.	
33	Horne, E. H.	Carpenter	2	1	0 11 6 per diem	10 0	5 10	15 10	
34	Harris, W. D.	〃	2	1	0 11 6 〃	15 3	..	15 3	
35	Smart, W. W.	〃	2	1	0 11 6 〃	7 0	8 5	14 8	
36	Duncan, P. T. G.	〃	2	1	0 11 6 〃	13 11	..	13 11	
37	Scofield, T. W.	〃	2	1	0 11 6 〃	13 11	..	13 11	
38	Wilson, E. J.	〃	2	1	0 11 6 〃	13 11	..	13 11	
39	Gray, R. D.	〃	2	1	0 11 6 〃	6 0	10 9	16 6	
40	Mundie, A. D.	〃	2	1	0 11 6 〃	6 0	9 2	14 8	
41	Allan, H.	〃	2	1	0 11 6 〃	6 0	9 2	14 8	
42	Evans, F. C.	〃	2	1	0 11 6 〃	6 0	15 5	14 7	
43	Johnson, H. R.	〃	2	1	0 11 6 〃	6 0	9 6	14 6	
44	O'Loughlin, G.	〃	2	1	0 11 6 〃	6 0	8 10	14 5	
45	Cameron, E.	〃	2	1	0 11 6 〃	6 0	8 5	14 3	
46	Ward, A. E.	〃	2	1	0 11 6 〃	6 0	8 3	14 3	
47	Moore, R.	〃	2	1	0 11 6 〃	6 0	7 2	13 2	
48	Cruickshank, R. J.	〃	2	1	0 11 6 〃	6 0	7 2	13 2	
49	Barnett, H. F.	〃	2	1	0 11 6 〃	6 0	7 2	13 2	
50	Corbett, L.	〃	2	1	0 11 6 〃	6 0	8 5	12 11	
51	Ellis, C. E.	〃	2	1	0 11 6 〃	6 0	6 8	12 8	
52	Smith, J. H. M.	〃	2	1	0 11 6 〃	6 0	6 8	12 8	
53	Olson, C. F.	〃	2	1	0 11 6 〃	6 0	5 10	11 10	
54	Alexander, J. E.	〃	2	1	0 11 6 〃	12 11	..	12 11	
55	Downing, W.	〃	2	1	0 11 6 〃	11 0	5 7	15 10	
56	Matthews, F. L.	〃	2	1	0 11 6 〃	11 0	4 4	15 4	
57	Ewbank, J.	〃	2	1	0 11 6 〃	11 0	4 1	15 1	
58	Wise, T. A.	〃	2	1	0 11 6 〃	12 9	..	12 9	
59	Black, G. E.	〃	2	1	0 11 6 〃	12 4	..	12 4	
60	Wiren, J. A.	〃	2	1	0 11 6 〃	12 0	..	12 0	
61	Peat, H. W.	〃	2	1	0 11 6 〃	12 5	..	12 5	
62	Williams, G. M.	〃	2	1	0 11 6 〃	11 10	..	11 10	
63	Kinsella, P. T.	〃	2	1	0 11 6 〃	11 8	..	11 8	
64	Gedye, O. A. S.	〃	2	1	0 11 6 〃	11 11	..	11 11	
65	Goldsmith, H.	〃	2	1	0 11 6 〃	11 5	..	11 5	
66	Knox, J. H.	〃	2	1	0 11 6 〃	11 6	..	11 6	
67	Edwards, E. A.	〃	2	1	0 11 6 〃	5 0	9 1	14 1	
68	Watson, W. S.	〃	2	1	0 11 6 〃	4 4	8 5	12 9	
69	Andrews, W.	〃	2	1	0 11 6 〃	4 4	5 1	4 9	
70	Harley, J. A.	〃	2	1	0 11 6 〃	4 4	4 4	8 8	
71	Neich, C. R. H.	〃	2	1	0 11 6 〃	4 4	2 5	6 9	
72	Hay, J.	〃	2	1	0 11 6 〃	4 4	5 5	9 9	
73	Clemo, H.	〃	2	1	0 11 6 〃	4 4	1 11	6 3	
74	Maples, J.	〃	2	1	0 11 6 〃	11 0	6 3	17 3	
75	McPhee, D. A.	〃	2	1	0 11 6 〃	11 0	4 5	15 5	
76	Lyon, S. J.	〃	2	1	0 11 6 〃	13 4	..	13 4	
77	Bannerman, E. I.	〃	2	1	0 11 6 〃	12 8	..	12 8	
78	Mercer, A. W.	〃	2	1	0 11 6 〃	12 8	..	12 8	
79	Sloan, P. B.	〃	2	1	0 11 6 〃	13 0	..	13 0	
80	Hagan, H.	〃	2	1	0 11 6 〃	12 10	..	12 10	
81	Baker, W. J.	〃	2	1	0 11 6 〃	11 10	..	11 10	
82	Thomas, G. H.	〃	2	1	0 11 6 〃	11 6	..	11 6	
83	Lawson, T. M.	〃	2	1	0 11 6 〃	11 6	..	11 6	
84	I'Anson, J. D.	〃	2	1	0 11 6 〃	6 0	15 1	14 3	
85	Williams, T.	〃	2	1	0 11 6 〃	11 0	..	11 0	
86	Young, F. G. R.	〃	2	1	0 11 6 〃	10 10	..	10 10	
87	Burrows, A. S.	〃	2	1	0 11 6 〃	10 8	..	10 8	
88	Wilson, W. J.	〃	2	1	0 11 6 〃	11 5	..	11 5	
89	Whitcher, H.	〃	2	1	0 11 6 〃	13 9	..	13 9	
90	Mander, C. R.	〃	2	1	0 11 6 〃	11 4	..	11 4	
91	Neill, W. R.	〃	2	1	0 11 6 〃	10 8	..	10 8	
92	Tennet, A. W.	〃	2	1	0 11 6 〃	11 3	..	11 3	
93	Haslemore, J.	〃	2	1	0 11 6 〃	10 2	..	10 2	
94	Miller, P. A.	〃	2	1	0 11 6 〃	10 1	..	10 1	
95	Harvey, J. W.	〃	2	1	0 11 6 〃	10 4	..	10 4	
96	Patten, O. D. W.	〃	2	1	0 11 6 〃	9 10	..	9 10	
97	Barltrop, C.	〃	2	1	0 11 6 〃	3 0	8 11	9 3	
98	Rogers, S. D.	〃	2	1	0 11 6 〃	10 11	..	10 11	
99	McDonald, J.	〃	2	1	0 11 6 〃	11 0	..	11 0	
100	Boyd, C. D.	〃	2	1	0 11 6 〃	9 8	..	9 8	
101	Fuller, L. R.	〃	2	1	0 11 6 〃	9 1	..	9 1	
102	Rawlinson, E.	〃	2	1	0 11 6 〃	2 0	8 7	8 11	
103	Low, W.	〃	2	1	0 11 6 〃	2 0	6 6	8 6	
104	Campbell, R. J. A.	〃	2	1	0 11 6 〃	2 0	11 6	8 4	
105	Richardson, F. J.	〃	2	1	0 11 0 〃	8 9	..	8 9	
106	Haxell, G. N.	〃	2	1	0 11 0 〃	8 0	..	8 0	
107	Champ, C. N.	〃	2	1	0 11 0 〃	8 5	..	8 5	
108	Daly, T. H.	〃	2	1	0 11 0 〃	7 11	..	7 11	
109	Walker, H. A. N.	〃	2	1	0 11 0 〃	8 0	..	8 0	

RAILWAY DEPARTMENT CLASSIFICATION, 1913—*continued.*

SECOND DIVISION—*continued.*

Class 2: Locomotive—continued.

Prog. No.	Name.	Classification.				Service			Remarks.
		Designation.	Subclass.	Grade.	Rate of Pay.	Since last appointed.	Prior to Date last appointed.	For Superannuation Purposes.	
					£ s. d.	Y. M.	Y. M.	Y. M.	
110	Sinclair, J. A.	Carpenter	2	1	0 11 0 per diem	7 7	..	7 7	
111	Goodall, C.	„	2	1	0 11 0 „	7 11	..	7 11	
112	Jones, E. F.	„	2	1	0 11 0 „	7 6	..	7 6	
113	Hill, W. P.	„	2	1	0 10 6 „	8 1	..	8 1	
114	Connor, W. W.	„	2	1	0 10 6 „	7 0	..	7 0	
115	Head, H. R.	„	2	1	0 10 6 „	6 11	..	6 11	
116	Armstrong, A. K.	„	2	1	0 10 6 „	6 5	..	6 5	
117	Falla, L. M.	„	2	1	0 10 6 „	7 1	..	7 1	
118	Manderson, C.	„	2	1	0 10 6 „	6 5	..	6 5	
119	Gibbs, F. R.	„	2	1	0 11 0 „	1 day	5 10	..	
120	Hay, J. G.	„	2	1	0 11 6 „	1 „	6 0	..	
121	Grant, P.	„	2	1	0 11 6 „	1 „	9 4	..	
1	Barnes, P. J.	Patternmaker	2	1	0 11 6 „	10 0	5 5	15 5	
2	Jenkins, F. R.	„	2	1	0 11 6 „	11 4	..	11 4	
1	Mossong, L. C. H.	Painter	2	1	0 11 6 „	4 4	3 3	7 7	
2	Jolly, J.	„	2	1	0 11 6 „	20 2	5 5	25 11	
3	Macdonald, J. A.	„	2	1	0 11 6 „	18 10	5 3	18 10	
4	McKechnie, J.	„	2	1	0 11 6 „	24 6	..	24 6	
5	Cowan, R. H.	„	2	1	0 11 6 „	23 8	..	23 8	
6	Wilkins, C. E.	„	2	1	0 11 6 „	11 0	8 10	19 10	
7	Williams, A.	„	2	1	0 11 6 „	11 0	7 5	18 5	
8	Kite, H. E.	„	2	1	0 11 6 „	22 5	2 9	22 5	
9	Stokes, T. J.	„	2	1	0 11 6 „	11 0	12 2	16 10	
10	Harrison, R. M.	„	2	1	0 11 6 „	18 5	..	18 5	
11	Potbury, H. W.	„	2	1	0 11 6 „	17 10	..	17 10	
12	Foster, E. J.	„	2	1	0 11 6 „	11 0	6 9	17 9	
13	Hampton, R.	„	2	1	0 11 6 „	11 0	6 9	17 9	
14	Cooper, R. T.	„	2	1	0 11 6 „	11 0	6 9	17 9	
15	Carey, P. O.	„	2	1	0 11 6 „	11 0	6 4	17 4	
16	Kelly, D. G.	„	2	1	0 11 6 „	11 0	5 11	15 9	
17	Young, N.	„	2	1	0 11 6 „	11 0	2 3	13 3	
18	Gibbs, J. J.	„	2	1	0 11 6 „	10 0	5 9	15 9	
19	D'Authreau, G.	„	2	1	0 11 6 „	24 0	..	24 0	
20	Auton, T.	„	2	1	0 11 6 „	6 0	18 3	17 0	
21	Turnpenny, G. J.	„	2	1	0 11 6 „	6 0	17 5	15 9	
22	Wright, A. W.	„	2	1	0 11 6 „	6 0	13 4	14 8	
23	Mooney, W. P.	„	2	1	0 11 6 „	6 0	8 7	14 7	
24	Farrant, A. E.	„	2	1	0 11 6 „	6 0	8 7	14 7	
25	Goodman, T. D.	„	2	1	0 11 6 „	6 0	8 5	13 3	
26	Molloy, A. J.	„	2	1	0 11 6 „	6 0	7 3	13 3	
27	Medhurst, A. H.	„	2	1	0 11 6 „	6 0	7 3	13 3	
28	Matheson, J. K.	„	2	1	0 11 6 „	6 0	7 1	13 1	
29	Holland, J.	„	2	1	0 11 6 „	6 0	6 9	12 9	
30	Harris, W. A.	„	2	1	0 11 6 „	6 0	6 6	12 6	
31	Cuddy, A. C. J.	„	2	1	0 11 6 „	6 0	6 4	12 4	
32	Peck, G. L.	„	2	1	0 11 6 „	6 0	6 2	12 2	
33	Turley, G. W.	„	2	1	0 11 6 „	6 0	6 2	12 2	
34	Fisher, A. E.	„	2	1	0 11 6 „	6 0	5 8	11 8	
35	Douslin, F.	„	2	1	0 11 6 „	6 0	7 8	13 8	
36	Carver, A. C.	„	2	1	0 11 6 „	5 0	5 9	10 9	
37	Brewer, R. W.	„	2	1	0 11 6 „	5 0	6 9	10 6	
38	Miller, W.	„	2	1	0 11 6 „	4 4	11 7	13 5	
39	Barnes, T. H.	„	2	1	0 11 6 „	4 4	17 4	16 3	
40	Robb, D.	„	2	1	0 11 6 „	13 6	..	13 6	
41	Hepburn, A.	„	2	1	0 11 6 „	12 5	..	12 5	
42	Gaffaney, V. F.	„	2	1	0 11 6 „	12 8	..	12 8	
43	Wiberg, J. N.	„	2	1	0 11 6 „	11 9	..	11 9	
44	Cuttle, W. J.	„	2	1	0 11 6 „	6 8	2 6	8 3	
45	Ashley, R. R.	„	2	1	0 11 6 „	6 0	18 3	17 0	
46	McCullough, W. J.	„	2	1	0 11 6 „	11 3	..	11 3	
47	Casey, A. O.	„	2	1	0 11 6 „	11 6	..	11 6	
48	Yarrall, W. J.	„	2	1	0 11 6 „	11 6	..	11 6	
49	Roud, J. G.	„	2	1	0 11 6 „	10 1	..	10 1	
50	Vause, A.	„	2	1	0 11 6 „	9 5	..	9 5	
51	Brierly, G. P.	„	2	1	0 11 6 „	3 0	14 4	9 11	
52	Taylor, J. H.	„	2	1	0 11 6 „	11 4	..	11 4	
53	O'Brien, M. F.	„	2	1	0 11 6 „	10 10	..	10 10	
54	Weir, W. C.	„	2	1	0 11 6 „	9 7	..	9 7	
55	Thayer, P. E.	„	2	1	0 11 6 „	10 5	..	10 5	
56	Hutchings, C. R.	„	2	1	0 11 6 „	9 6	..	9 6	
57	Creamer, S. C.	„	2	1	0 11 6 „	8 9	..	8 9	
58	Pointon, A. P.	„	2	1	0 11 0 „	4 4	4 8	9 0	
59	Greenfield, F. W.	„	2	1	0 11 0 „	8 0	..	8 0	
60	Tansey, W. T.	„	2	1	0 11 0 „	7 4	..	7 4	
61	McDonald, R.	„	2	1	0 11 6 „	1 0	6 7	7 7	

RAILWAY DEPARTMENT CLASSIFICATION, 1913—*continued.*

SECOND DIVISION—*continued.*

Class 2: Locomotive—continued.

Prog. No.	Name.	Classification.				Service			Remarks.
		Designation.	Subclass.	Grade.	Rate of Pay.	Since last appointed.	Prior to Date last appointed.	For Superannuation Purposes.	
					£ s. d.	Y. M.	Y. M.	Y. M.	
62	Anderson, A. T.	Painter	2	1	0 11 6 per diem	1 0	5 10	6 10	
63	Abernethy, G. C.	„	2	1	0 10 6 „	7 2	..	7 2	
64	Cross, A. C.	„	2	1	0 10 6 „	7 2	..	7 2	
65	McMillan, A. T.	„	2	1	0 10 6 „	7 3	..	7 3	
1	Wellington, S. H.	Ironmoulder	2	1	0 11 6 „	11 0	2 1	13 1	
2	Davis, A. L.	„	2	1	0 11 6 „	11 0	1 9	12 9	
3	Sainsbury, H.	„	2	1	0 11 6 „	11 0	0 11	11 11	
4	Boakes, G. A.	„	2	1	0 11 6 „	11 0	2 0	11 10	
5	Thompson, W. G.	„	2	1	0 11 6 „	11 0	0 10	11 10	
6	Sherwood, H. E.	„	2	1	0 11 6 „	11 0	0 10	11 10	
7	Batchelor, G. H.	Brassmoulder	2	1	0 11 6 „	10 0	8 5	18 5	
8	Hobbs, W. E.	Ironmoulder	2	1	0 11 6 „	11 0	0 10	11 10	
9	Rodger, J.	Brassmoulder	2	1	0 11 6 „	8 0	15 6	19 2	
10	Melville, A.	Ironmoulder	2	1	0 11 6 „	10 5	..	10 5	
11	Bush, A. E.	„	2	1	0 11 6 „	6 0	5 11	11 11	
12	Symister, H.	„	2	1	0 11 6 „	6 0	5 8	11 8	
13	Whiting, A. E.	„	2	1	0 11 6 „	6 0	5 1	11 1	
14	Lusty, C. F.	„	2	1	0 11 6 „	12 9	..	12 9	
15	Sewell, W.	Brassmoulder	2	1	0 11 6 „	15 0	..	15 0	
16	Tyson, R. J.	Ironmoulder	2	1	0 11 6 „	9 8	..	9 8	
17	Rowley, A.	„	2	1	0 11 6 „	3 0	6 10	9 10	
18	Miller, W. D.	Brassmoulder	2	1	0 11 6 „	11 6	..	11 6	
19	Rice, T. M.	Ironmoulder	2	1	0 11 6 „	10 3	..	10 3	
20	Devine, P. J.	„	2	1	0 11 6 „	9 3	..	9 3	
21	Moore, J. K.	Brassmoulder	2	1	0 11 6 „	9 4	..	9 4	
22	Kennedy, J.	„	2	1	0 11 0 „	1 0	6 6	1 0	
23	Bowman, J. S.	Ironmoulder	2	1	0 11 6 „	1 0	5 11	6 11	
24	Pashley, J. H.	„	2	1	0 11 6 „	1 0	5 9	6 9	
25	Organ, H.	„	2	1	0 11 6 „	1 0	5 8	1 0	
26	Jones, R. W.	„	2	1	0 11 6 „	1 0	5 7	1 0	
27	Briggs, T. H.	„	2	1	0 11 6 „	1 day	5 9	..	
28	Ormandy, A. J.	„	2	1	0 11 6 „	1 „	5 1	..	
1	O'Hern, D. P.	Coppersmith	2	1	0 11 6 „	6 0	17 4	17 0	
2	Cairns, J.	„	2	1	0 11 6 „	10 0	9 0	19 0	
3	Couchman, A. E.	„	2	1	0 11 0 „	12 0	..	12 0	
4	Reid, W. E.	„	2	1	0 11 6 „	6 0	5 1	11 1	
5	O'Connor, M. J.	„	2	1	0 11 6 „	11 11	..	11 11	
6	Lonergan, J. P. F. A.	„	2	1	0 11 6 „	11 5	..	11 5	
7	Fletcher, W.	„	2	1	0 11 6 „	11 0	..	11 0	
8	Smith, G.	„	2	1	0 11 6 „	9 10	..	9 10	
9	Newlands, J.	„	2	1	0 11 6 „	1 0	5 11	1 0	
1	Growden, H. H.	Tinsmith	2	1	0 11 6 „	29 11	..	29 11	
2	Connor, E.	„	2	1	0 11 6 „	6 0	8 7	13 7	
3	Evans, E. E.	„	2	1	0 11 6 „	6 0	6 7	12 7	
4	Carrell, G.	„	2	1	0 11 6 „	11 0	3 11	14 11	
5	Daly, W.	„	2	1	0 11 6 „	11 0	2 3	13 3	
6	Sullivan, W.	„	2	1	0 11 6 „	12 0	..	12 0	
7	Hudson, C. E.	„	2	1	0 11 6 „	10 0	6 2	16 2	
1	Stevens, J. J.	Trimmer	2	1	0 11 6 „	10 0	5 4	15 4	
2	Parsonson, W. E.	„	2	1	0 11 6 „	7 0	8 3	15 2	
3	Drumm, J.	„	2	1	0 11 6 „	7 0	7 7	14 7	
4	Hayes, T.	„	2	1	0 11 6 „	6 0	8 6	14 6	
5	Hutcheson, A. S.	„	2	1	0 11 6 „	4 4	4 8	9 0	
6	King, T. A.	„	2	1	0 11 6 „	11 11	..	11 11	
7	Sansbury, W. R.	„	2	1	0 11 6 „	11 5	..	11 5	
8	Proctor, N. C.	„	2	1	0 11 0 „	7 9	..	7 9	
1	Saunders, E. G.	Sailmaker	2	1	0 11 6 „	8 0	22 4	15 6	
2	Morrison, W.	„	2	1	0 11 6 „	27 1	1 0	..	
3	Wright, J.	„	2	1	0 11 6 „	30 3	..	..	
4	Tornstrom, P. H.	„	2	1	0 11 6 „	4 4	1 11	6 3	
5	Gordon, J. R.	„	2	1	0 11 6 „	1 day	5 6	..	
1	Newton, A. B.	Fitter	2	2	0 10 0 „	13 4	..	13 4	
2	Charleston, A. A.	„	2	2	0 10 0 „	6 8	..	6 8	
3	Barton, F. H.	„	2	2	0 10 0 „	5 11	..	5 11	
4	Curtis, V. A.	„	2	2	0 10 0 „	5 8	..	5 8	
5	Robertson, W.	„	2	2	0 10 0 „	6 5	..	6 5	
6	Stevens, A. M.	„	2	2	0 10 0 „	5 7	..	5 7	
7	Arrowsmith, B. P.	„	2	2	0 10 0 „	6 4	..	6 4	
8	Johns, H. I.	„	2	2	0 10 0 „	5 5	..	5 5	
9	Williams, E. R.	„	2	2	0 10 0 „	6 2	..	6 2	
10	Dobbie, J. W.	„	2	2	0 10 0 „	5 4	..	5 4	

RAILWAY DEPARTMENT CLASSIFICATION, 1913—*continued.*

SECOND DIVISION—*continued.*

Class 2: Locomotive—continued.

Prog. No.	Name.	Classification.				Service			Remarks.
		Designation.	Subclass.	Grade.	Rate of Pay	Since last appointed.	Prior to Date last appointed.	For Superannuation Purposes.	
					£ s. d.	Y. M.	Y. M.	Y. M.	
11	Boyes, A. C.	Fitter	2	2	0 10 0 per diem	5 5	..	5 5	
12	Smith, G. F.	„	2	2	0 10 0 „	5 7	..	5 7	
13	Calcinai, U. P.	„	2	2	0 10 0 „	5 10	..	5 10	
14	Leek, A. W.	„	2	2	0 10 0 „	6 1	..	6 1	
15	Bright, H.	„	2	2	0 10 0 „	5 3	..	5 3	
16	Hoare, H. J.	„	2	2	0 10 0 „	5 5	..	5 5	
17	Melrose, W. J.	„	2	2	0 10 0 „	6 0	..	6 0	
1	Dormer, H. W.	Turner	2	2	0 10 0 „	5 6	..	5 6	
2	McCracken, C. D.	„	2	2	0 10 0 „	6 3	..	6 3	
3	Reynolds, F. A.	„	2	2	0 10 0 „	5 4	..	5 4	
4	Withers, M. E.	„	2	2	0 10 0 „	6 3	..	6 3	
1	Haig, J.	Boilermaker	2	2	0 10 0 „	6 0	9 6	15 6	
2	Priest, H. R.	„	2	2	0 10 0 „	6 2	..	6 2	
3	Hall, A. C.	„	2	2	0 10 0 „	5 10	..	5 10	
4	Angus, R.	„	2	2	0 10 0 „	6 6	..	6 6	
5	Stephenson, A. O.	„	2	2	0 10 0 „	5 8	..	5 8	
6	Trewern, F. D.	„	2	2	0 10 0 „	6 1	..	6 1	
7	Carrell, A. L.	„	2	2	0 10 0 „	5 4	..	5 4	
1	Grey, E. J.	Blacksmith	2	2	0 10 0 „	7 7	..	7 7	
2	Tetai, I.	„	2	2	0 10 0 „	6 6	..	6 6	
3	Sloan, J. H.	„	2	2	0 10 0 „	6 2	..	6 2	
1	Ireland, P.	Carpenter	2	2	0 10 0 „	5 0	8 3	13 3	
2	Davis, A. B.	„	2	2	0 10 0 „	6 0	5 8	11 8	
3	Whitcombe, A.	„	2	2	0 10 0 „	10 2	..	10 2	
4	Thomas, S.	„	2	2	0 10 0 „	6 7	..	6 7	
5	James, C.	„	2	2	0 10 0 „	5 9	..	5 9	
6	Robinson, J.	„	2	2	0 10 0 „	6 7	..	6 7	
7	Priest, A. C.	„	2	2	0 10 0 „	6 7	..	6 7	
8	Skellon, I. H.	„	2	2	0 10 0 „	6 5	..	6 5	
9	Davidson, W. A. R.	„	2	2	0 10 0 „	6 1	..	6 1	
10	McKay, A.	„	2	2	0 10 0 „	5 5	..	5 5	
11	Nelson, C. A.	„	2	2	0 10 0 „	5 5	..	5 5	
12	Cowan, F. H.	„	2	2	0 10 0 „	5 11	..	5 11	
1	Martin, J.	Painter	2	2	0 10 0 „	11 0	4 9	13 10	
2	Johnston, J.	„	2	2	0 10 0 „	6 10	..	6 10	
3	Beatson, A.	„	2	2	0 10 0 „	6 3	..	6 3	
4	Simms, H. H. R.	„	2	2	0 10 0 „	6 6	..	6 6	
5	Fitzmaurice, W. G.	„	2	2	0 10 0 „	6 7	..	6 7	
6	Smethurst, A.	„	2	2	0 10 0 „	5 11	..	5 11	
7	Lambert, E.	„	2	2	0 10 0 „	6 6	..	6 6	
8	Martin, W. J.	„	2	2	0 10 0 „	6 2	..	6 2	
9	McQuarrie, E. D.	„	2	2	0 10 0 „	5 3	..	5 3	
10	Hanna, J. J.	„	2	2	0 10 0 „	6 1	..	6 1	
1	Bold, C.	Brassmoulder	2	2	0 10 0 „	5 11	..	5 11	
2	List, J. H.	Ironmoulder	2	2	0 10 0 „	6 5	..	6 5	
3	Moyna, E. T. J.	Brassmoulder	2	2	0 10 0 „	5 11	..	5 11	
4	Kerr, W. T.	„	2	2	0 10 0 „	5 2	..	5 2	
5	Bond, H. E. B.	Ironmoulder	2	2	0 10 0 „	5 9	..	5 9	
1	Colquhoun, R. J.	Coppersmith	2	2	0 10 0 „	6 6	..	6 6	
1	Nicol, J.	Tinsmith	2	2	0 10 0 „	5 11	..	5 11	
1	Fox, W. M. G.	Trimmer	2	2	0 10 0 „	6 2	..	6 2	
2	Rope, R. P.	„	2	2	0 10 0 „	5 8	..	5 8	
1	McCarthy, C. B.	Junior Fitter	3	..	0 9 0 „	4 10	..	4 10	
1	Bell, W. E.	Apprentice Fitter	3	..	0 5 6 „	5 10	..	5 10	
2	Anderson, D.	„	3	..	0 5 6 „	5 9	..	5 9	
3	Ross, J.	„	3	..	0 5 6 „	5 4	..	5 4	
4	Brown, M. C.	„	3	..	0 5 6 „	5 0	..	5 0	
5	Dickson, A. F.	„	3	..	0 5 6 „	4 11	..	4 11	
6	Revington, E. G.	„	3	..	0 5 6 „	4 10	..	4 10	
7	Carter, C.	„	3	..	0 5 6 „	4 9	..	4 9	
8	Perkins, C. A. R.	„	3	..	0 5 6 „	4 9	..	4 9	
9	Rasmussen, L. V.	„	3	..	0 5 6 „	4 9	..	4 9	
10	Quick, H. W.	„	3	..	0 5 6 „	4 8	..	4 8	
11	Hill, W. H. A.	„	3	..	0 5 6 „	4 7	..	4 7	
12	Wadsworth, G. C.	„	3	..	0 5 6 „	4 3	..	4 3	
13	Varney, R. D. A.	„	3	..	0 5 6 „	4 3	..	4 3	

Railway Department Classification, 1913—*continued.*

Prog. No.	Name.	Classification.				Service			Remarks.
		Designation.	Subclass.	Grade.	Rate of Pay.	Since last appointed.	Prior to Date last appointed.	For Superannuation Purposes.	
	SECOND DIVISION—*continued.*								
	Class 2: Locomotive—continued.								
					£ s. d.	Y. M.	Y. M.	Y. M.	
14	Woodfield, J. L.	Apprentice Fitter	3	..	0 5 6 per diem	4 3	..	4 3	
15	Barker, P.	„	3	..	0 5 6 „	4 3	..	4 3	
16	Nicholson, C. J. S.	„	3	..	0 5 6 „	4 3	..	4 3	
17	Brown, C. S.	„	3	..	0 5 6 „	4 2	..	4 2	
18	McGill, J. W.	„	3	..	0 5 6 „	4 1	..	4 1	
19	Jenkins, T. W.	„	3	..	0 4 0 „	3 8	..	3 8	
20	King, J. C.	„	3	..	0 4 0 „	3 7	..	3 7	
21	Wells, A. H.	„	3	..	0 4 0 „	3 6	..	3 6	
22	Horrobin, F. W.	„	3	..	0 4 0 „	3 5	..	3 5	
23	Gatehouse, C. H.	„	3	..	0 4 0 „	3 4	..	3 4	
24	Weston, G. H.	„	3	..	0 4 0 „	3 4	..	3 4	
25	Richards, S.	„	3	..	0 4 0 „	3 3	..	3 3	
26	Crosswell, A. G.	„	3	..	0 3 0 „	2 11	..	2 11	
27	Williams, W. H.	„	3	..	0 3 0 „	2 10	..	2 10	
28	Ridler, H. T.	„	3	..	0 3 0 „	2 10	..	2 10	
29	Round, D. C.	„	3	..	0 3 0 „	2 10	..	2 10	
30	Neels, S.	„	3	..	0 3 0 „	2 8	..	2 8	
31	Wilson, J. C.	„	3	..	0 3 0 „	2 8	..	2 8	
32	Murray, W. C.	„	3	..	0 3 0 „	2 7	..	2 7	
33	Latimer, L. H.	„	3	..	0 3 0 „	2 7	..	2 7	
34	Culley, R. A.	„	3	..	0 3 0 „	2 7	..	2 7	
35	Brough, L. H.	„	3	..	0 3 0 „	2 7	..	2 7	
36	Evans, R. D. J.	„	3	..	0 3 0 „	2 7	..	2 7	
37	Timlin, P. J.	„	3	..	0 3 0 „	2 7	..	2 7	
38	Murray, A. I.	„	3	..	0 3 0 „	2 7	..	2 7	
39	Moffat, R. M.	„	3	..	0 3 0 „	2 6	..	2 6	
40	Stewart, A. G.	„	3	..	0 3 0 „	2 5	..	2 5	
41	Donn, A. J.	„	3	..	0 3 0 „	2 5	..	2 5	
42	Davies, J.	„	3	..	0 3 0 „	2 4	..	2 4	
43	Blackburn, P.	„	3	..	0 3 0 „	2 3	..	2 3	
44	Suters, C. G.	„	3	..	0 3 0 „	2 2	..	2 2	
45	Bond, J.	„	3	..	0 3 0 „	2 2	..	2 2	
46	Lockett, J. M. B.	„	3	..	0 3 0 „	2 2	..	2 2	
47	Mosley, C. C.	„	3	..	0 3 0 „	2 2	..	2 2	
48	Barry, J.	„	3	..	0 3 0 „	2 2	..	2 2	
49	Jackson, F.	„	3	..	0 3 0 „	2 2	..	2 2	
50	O'Leary, T. D. J.	„	3	..	0 3 0 „	2 1	..	2 1	
51	Vincent, R. E.	„	3	..	0 3 0 „	2 1	..	2 1	
52	Campbell, J. M.	„	3	..	0 3 0 „	2 1	..	2 1	
53	Read, F. J.	„	3	..	0 3 0 „	2 1	..	2 1	
54	Connor, A. M.	„	3	..	0 3 0 „	2 0	..	2 0	
55	Harkess, H. W.	„	3	..	0 3 0 „	2 0	..	2 0	
56	Hill, P.	„	3	..	0 2 6 „	1 11	..	1 11	
57	Insley, H. W.	„	3	..	0 2 6 „	1 10	..	1 10	
58	Morgan, J. W.	„	3	..	0 2 6 „	1 9	..	1 9	
59	Nicholson, J. N.	„	3	..	0 2 6 „	1 8	..	1 8	
60	Darragh, J. F.	„	3	..	0 2 6 „	1 8	..	1 8	
61	Hand, R. J.	„	3	..	0 2 6 „	1 8	..	1 8	
62	Sutherland, H. M.	„	3	..	0 2 6 „	1 8	..	1 8	
63	Parrant, A. L.	„	3	..	0 2 6 „	1 8	..	1 8	
64	Martin, F. S.	„	3	..	0 2 6 „	1 8	..	1 8	
65	Shaw, A. D. L.	„	3	..	0 2 6 „	1 8	..	1 8	
66	Callander, E. J.	„	3	..	0 2 6 „	1 8	..	1 8	
67	Harland, A. E.	„	3	..	0 2 6 „	1 7	..	1 7	
68	Smith, R. E.	„	3	..	0 2 6 „	1 7	..	1 7	
69	McKenzie, W.	„	3	..	0 2 6 „	1 7	..	1 7	
70	Hill, G. D.	„	3	..	0 2 6 „	1 7	..	1 7	
71	Burt, O. C.	„	3	..	0 2 6 „	1 7	..	1 7	
72	Smith, A. J. F.	„	3	..	0 2 6 „	1 7	..	1 7	
73	Kummert, A. W.	„	3	..	0 2 6 „	1 5	..	1 5	
74	Nelson, A.	„	3	..	0 2 6 „	1 5	..	1 5	
75	Guinness, A. H.	„	3	..	0 2 6 „	1 5	..	1 5	
76	Howlett, D.	„	3	..	0 2 6 „	1 4	..	1 4	
77	Watson, G. C.	„	3	..	0 2 6 „	1 2	..	1 2	
78	Burbush, L. C.	„	3	..	0 2 6 „	1 2	..	1 2	
79	Lennon, P. M.	„	3	..	0 2 6 „	1 2	..	1 2	
80	Smith, C. R.	„	3	..	0 2 6 „	1 2	..	1 2	
81	Martin, A. G.	„	3	..	0 2 6 „	1 1	..	1 1	
82	Currie, K. E.	„	3	..	0 2 6 „	1 1	..	1 1	
83	Williams, A. F. S.	„	3	..	0 2 6 „	1 0	..	1 0	
84	Beaumont, H. W.	„	3	..	0 2 0 „	1 0	..	1 0	
85	Manderson, P.	„	3	..	0 2 0 „	0 11	..	0 11	
86	Flaws, C. J.	„	3	..	0 2 0 „	0 11	..	0 11	
87	Hoare, W. B.	„	3	..	0 2 0 „	0 11	..	0 11	
88	Miller, A.	„	3	..	0 2 0 „	0 11	..	0 11	
89	Bowden, J. C.	„	3	..	0 2 0 „	0 11	..	0 11	
90	Williams, J. C.	„	3	..	0 2 0 „	0 10	..	0 10	

RAILWAY DEPARTMENT CLASSIFICATION, 1913—*continued.*

Prog. No.	Name.	Classification.				Service			Remarks
		Designation.	Subclass.	Grade.	Rate of Pay.	Since last appointed.	Prior to Date last appointed.	For Superannuation Purposes.	
		SECOND DIVISION—*continued.*							
		Class 2: Locomotive—continued.							
					£ s. d.	Y. M.	Y. M.	Y. M.	
91	Vincent, A. E. ..	Apprentice Fitter ..	3	..	0 2 0 per diem	0 9	..	0 9	
92	O'Docherty, J. A. ..	„ ..	3	..	0 2 0 „	0 9	..	0 9	
93	Fraser, G. T.	„ ..	3	..	0 2 0 „	0 9	..	0 9	
94	Ogg, F. C.	„ ..	3	..	0 2 0 „	0 9	..	0 9	
95	Simpson, P. R. ..	„ ..	3	..	0 2 0 „	0 9	..	0 9	
96	Callon, L. E.	„ ..	3	..	0 2 0 „	0 9	..	0 9	
97	Walls, W. R. G. ..	„ ..	3	..	0 2 0 „	0 9	..	0 9	
98	Grinstead, H. M. ..	„ ..	3	..	0 2 0 „	0 9	..	0 9	
99	Small, R. M.	„ ..	3	..	0 2 0 „	0 8	..	0 8	
100	Goss, H. C. L. ..	„ ..	3	..	0 2 0 „	0 7	..	0 7	
101	Clarke, T.	„ ..	3	..	0 2 0 „	0 7	..	0 7	
102	McConchie, A. G. ..	„ ..	3	..	0 2 0 „	0 7	..	0 7	
103	Thomson, M. M. ..	„ ..	3	..	0 2 0 „	0 2	..	0 2	
104	Goldsack, W. G. ..	„ ..	3	..	0 2 0 „	0 2	..	0 2	
105	Devlin, W. H. ..	„ ..	3	..	0 2 0 „	0 2	..	0 2	
106	Bryant, W. P. ..	„ ..	3	..	0 2 0 „	0 2	..	0 2	
107	Welsh, J. B.	„ ..	3	..	0 2 0 „	0 2	..	0 2	
108	Chudley, L. W. ..	„ ..	3	..	0 2 0 „	0 2	..	0 2	
109	Kelly, J. D.	„ ..	3	..	0 2 0 „	0 1	..	0 1	
110	McCrorie, H.	„ ..	3	..	0 2 0 „	0 1	..	0 1	
111	Ross, A. J.	„ ..	3	..	0 2 0 „	0 1	..	0 1	
112	Sullivan, S. P. ..	„ ..	3	..	0 2 0 „	0 1	..	0 1	
113	Williams, F. W. ..	„ ..	3	..	0 2 0 „	0 1	..	0 1	
1	Caldwell, A. S. ..	Apprentice Turner ..	3	..	0 5 6 „	5 5	..	5 5	
2	Morris, R. M... ..	„ ..	3	..	0 5 6 „	5 5	..	5 5	
3	McAuley, F. G. ..	„ ..	3	..	0 5 6 „	5 1	..	5 1	
4	Burnley, H. B. ..	„ ..	3	..	0 5 6 „	4 10	..	4 10	
5	Hill, C. R.	„ ..	3	..	0 5 6 „	4 9	..	4 9	
6	Cosgrove, J. J. ..	„ ..	3	..	0 5 6 „	4 4	..	4 4	
7	Greenfield, A. J. ..	„ ..	3	..	0 5 6 „	4 2	..	4 2	
8	Edwards, J.	„ ..	3	..	0 4 0 „	3 8	..	3 8	
9	Wilson, J.	„ ..	3	..	0 4 0 „	3 6	..	3 6	
10	McCarthy, D... ..	„ ..	3	..	0 4 0 „	3 5	..	3 5	
11	Dee, H. W. E. ..	„ ..	3	..	0 3 0 „	2 8	..	2 8	
12	Smith, C. H.	„ ..	3	..	0 3 0 „	2 3	..	2 3	
13	Mouat, R. D. W. ..	„ ..	3	..	0 3 0 „	2 2	..	2 2	
14	Overend, W. T. ..	„ ..	3	..	0 3 0 „	2 2	..	2 2	
15	McCormack, P. J. ..	„ ..	3	..	0 3 0 „	2 2	..	2 2	
16	Stout, R. G. K. ..	„ ..	3	..	0 2 6 „	1 11	..	1 11	
17	Davis, C. T. F. ..	„ ..	3	..	0 2 6 „	1 1	..	1 1	
18	Adams, C. E... ..	„ ..	3	..	0 2 0 „	0 11	..	0 11	
1	Wilson, G. M. ..	Apprentice Boilermaker	3	..	0 5 6 „	5 10	..	5 10	
2	Wilson, J. W. ..	„	3	..	0 5 6 „	5 2	..	5 2	
3	Doble, F. W.	„	3	..	0 5 6 „	4 10	..	4 10	
4	Hudson, T. H. ..	„	3	..	0 5 6 „	4 9	..	4 9	
5	Phillips, H. A. ..	„	3	..	0 5 6 „	4 8	..	4 8	
6	McIlvride, L. J. ..	„	3	..	0 4 0 „	3 11	..	3 11	
7	McMillan, R. P. B. ..	„	3	..	0 3 0 „	2 7	..	2 7	
8	Blaikie, T. C.	„	3	..	0 3 0 „	2 4	..	2 4	
9	Mackay, R. M. ..	„	3	..	0 3 0 „	2 2	..	2 2	
10	Marshall, L. A. ..	„	3	..	0 2 6 „	1 8	..	1 8	
11	Fayen, H. E... ..	„	3	..	0 2 6 „	1 7	..	1 7	
12	Barton, H. A... ..	„	3	..	0 2 6 „	1 7	..	1 7	
13	Forster, P.	„	3	..	0 2 0 „	0 5	..	0 5	
1	Nehua, A.	Apprentice Blacksmith ..	3	..	0 5 6 „	5 4	..	5 4	
2	Cossins, F. E. W. ..	„ ..	3	..	0 5 6 „	4 8	..	4 8	
3	Bench, A. J.	„ ..	3	..	0 5 6 „	4 7	..	4 7	
4	Dine, R. L.	„ ..	3	..	0 5 6 „	4 2	..	4 2	
5	Barry, J. P.	„ ..	3	..	0 3 0 „	2 7	..	2 7	
6	O'Connor, E.	Apprentice Springmaker	3	..	0 3 0 „	2 1	..	2 1	
7	Symister, H. C. ..	Apprentice Blacksmith ..	3	..	0 3 0 „	2 1	..	2 1	
8	Thompson, A. ..	„ ..	3	..	0 2 6 „	1 2	..	1 2	
9	Halsey, W. J. ..	„ ..	3	..	0 2 0 „	0 9	..	0 9	
10	Gedye, A. E.	„ ..	3	..	0 2 0 „	0 4	..	0 4	
1	Hartley, H.	Apprentice Carpenter ..	3	..	0 5 6 „	5 5	..	5 5	
2	Fraser, J. C.	„ ..	3	..	0 5 6 „	5 4	..	5 4	
3	Thompson, E... ..	„ ..	3	..	0 5 6 „	5 2	..	5 2	
4	Delany, R. A... ..	„ ..	3	..	0 5 6 „	4 8	..	4 8	
5	Cleary, L.	„ ..	3	..	0 3 0 „	2 7	..	2 7	
6	Haddy, W. S... ..	„ ..	3	..	0 2 6 „	1 11	..	1 11	
7	Barrow, H.	„ ..	3	..	0 2 6 „	1 8	..	1 8	
8	Miller, A.	„ ..	3	..	0 2 6 „	1 8	..	1 8	
9	Beale, F. S. L. ..	„ ..	3	..	0 2 6 „	1 7	..	1 7	

RAILWAY DEPARTMENT CLASSIFICATION, 1913—*continued.*

SECOND DIVISION—*continued.*

Class 2: Locomotive—continued.

Prog. No.	Name.	Classification. Designation.	Subclass.	Grade.	Rate of Pay. £	s.	d.		Service Since last appointed. Y. M.	Prior to Date last appointed. Y. M.	For Superannuation Purposes. Y. M.	Remarks
10	Taylor, S. A. I.	Apprentice Carpenter	3	..	0	2	6	per diem	1 7	..	1 7	
11	Gatehouse, G. H.	„	3	..	0	2	6	„	1 7	..	1 7	
12	Brown, E. V. H.	„	3	..	0	2	6	„	1 6	..	1 6	
13	Brough, L. F.	„	3	..	0	2	6	„	1 6	..	1 6	
14	Hedlund, A. C.	„	3	..	0	2	6	„	1 6	..	1 6	
15	Haydon, A. L.	„	3	..	0	2	6	„	1 6	..	1 6	
16	Walton, L. F.	„	3	..	0	2	6	„	1 6	..	1 6	
17	Douglas, A. L.	„	3	..	0	2	6	„	1 3	..	1 3	
18	Mayhew, J. B.	„	3	..	0	2	6	„	1 0	..	1 0	
19	Simmons, W. C.	„	3	..	0	2	0	„	0 11	..	0 11	
20	Leitch, W. J.	„	3	..	0	2	0	„	0 9	..	0 9	
21	Spencer, H. G.	„	3	..	0	2	0	„	0 9	..	0 9	
22	Kerr, E.	„	3	..	0	2	0	„	0 9	..	0 9	
23	Crawford, G.	„	3	..	0	2	0	„	0 9	..	0 9	
24	Douglass, J. R.	„	3	..	0	2	0	„	0 9	..	0 9	
25	Griffin, M.	„	3	..	0	2	0	„	0 9	..	0 9	
26	Ferrall, E. T.	„	3	..	0	2	0	„	0 8	..	0 8	
27	Murdoch, C. F. P.	„	3	..	0	2	0	„	0 3	..	0 3	
28	Durie, W. A.	„	3	..	0	2	0	„	0 2	..	0 2	
29	Syme, T. M.	„	3	..	0	2	0	„	0 2	..	0 2	
30	Smith, P. C.	„	3	..	0	2	0	„	0 1	..	0 1	
31	Smith, R. J.	„	3	..	0	2	0	„	13 days	..	13 days	
1	Evans, D. T.	Apprentice Patternmaker	3	..	0	2	6	„	1 7	..	1 7	
2	Sullivan, G. F.	„	3	..	0	2	6	„	1 6	..	1 6	
1	Beary, C. L.	Apprentice Painter	3	..	0	5	6	„	5 9	..	5 9	
2	Findlater, J. S.	„	3	..	0	5	6	„	5 4	..	5 4	
3	Lynam, P. L.	„	3	..	0	5	6	„	5 3	..	5 3	
4	Mackay, J.	„	3	..	0	5	6	„	5 3	..	5 3	
5	Child, P. W. A. V.	„	3	..	0	5	6	„	4 7	..	4 7	
6	Barker, W. G. D.	„	3	..	0	5	6	„	4 6	..	4 6	
7	Sanders, F.	„	3	..	0	5	6	„	4 2	..	4 2	
8	Berry, E. D.	„	3	..	0	4	0	„	3 11	..	3 11	
9	Harper, J.	„	3	..	0	4	0	„	3 11	..	3 11	
1	Stenhouse, O. J.	Apprentice Ironmoulder	3	..	0	5	6	„	4 10	..	4 10	
2	Ferguson, R. W.	„	3	..	0	5	6	„	4 6	..	4 6	
3	Dale, G.	„	3	..	0	5	6	„	4 2	..	4 2	
4	Evans, W. D.	„	3	..	0	4	0	„	3 6	..	3 6	
5	Wright, G. M.	Apprentice Brassmoulder	3	..	0	3	0	„	2 7	..	2 7	
6	Laing, G.	„	3	..	0	3	0	„	2 0	..	2 0	
7	Otten, J. B.	Apprentice Ironmoulder	3	..	0	2	6	„	1 11	..	1 11	
8	Hancock, C. O.	„	3	..	0	2	0	„	0 7	..	0 7	
1	White, M. J.	Apprentice Coppersmith	3	..	0	5	6	„	4 1	..	4 1	
1	Peters, F.	Apprentice Tinsmith	3	..	0	5	6	„	5 5	..	5 5	
1	Watt, R. J.	Apprentice Sailmaker	3	..	0	5	6	„	5 3	..	5 3	
1	Vinsen, H. G.	Machinist (wood)	4	1	0	10	0	„	23 11	..	23 11	
2	Cooke, S.	„ „	4	1	0	10	0	„	23 8	..	23 8	
3	Pointon, R.	„ „	4	1	0	10	0	„	11 0	9 11	16 8	
4	Rhodes, J. A.	„ „	4	1	0	10	0	„	11 0	4 6	15 6	
5	Yanko, T. A.	„ „	4	1	0	10	0	„	11 0	4 9	15 9	
6	Pollock, A. R.	„ „	4	1	0	10	0	„	11 0	4 1	15 1	
7	Ward, T.	„ „	4	1	0	10	0	„	11 0	4 7	15 7	
8	Dawson, T. C.	„ „	4	1	0	10	0	„	7 0	3 11	10 11	
9	Campbell, R.	„ „	4	1	0	10	0	„	5 0	5 0	10 0	
10	Nelson, J. E.	„ „	4	1	0	10	0	„	6 0	8 4	14 4	
11	Kirk, C. W.	„ „	4	1	0	10	0	„	6 0	6 11	12 11	
12	Jenkins, W. H.	„ „	4	1	0	10	0	„	13 0	18 11	22 11	
13	Kiely, W.	„ „	4	1	0	10	0	„	11 0	5 8	16 8	
14	Hobson, G. R.	„ „	4	1	0	10	0	„	7 0	6 2	13 2	
15	Stephens, R. H.	„ „	4	1	0	10	0	„	6 0	6 6	12 6	
16	Inglis, J. T.	„ „	4	1	0	10	0	„	16 11	..	16 11	
17	Winton, J.	„ „	4	1	0	10	0	„	5 0	8 4	13 4	
18	Taylor, J.	„ „	4	1	0	10	0	„	6 0	5 1	11 1	
1	Tavlor, W. A.	„ „	4	2	0	9	6	„	5 0	5 11	10 11	
2	Williams, G.	„ „	4	2	0	9	6	„	1 0	5 10	6 10	
1	McKeown, H. W.	Machinist (iron)	4	1	0	10	0	„	6 0	5 10	11 10	
2	Paterson, J. A.	„ „	4	1	0	10	0	„	32 1	1 9	..	
3	Hulbert, A.	„ „	4	1	0	10	0	„	31 5	0 10	31 5	
4	North, C. H.	„ „	4	1	0	10	0	„	23 9	2 0	..	
5	Merry, T. R.	„ „	4	1	0	10	0	„	31 6	0 3	31 6	
6	Silverwood, A. H	„ „	4	1	0	10	0	„	23 5	..	23 5	

RAILWAY DEPARTMENT CLASSIFICATION, 1913—*continued.*

SECOND DIVISION—*continued.*

Class 2: Locomotive—continued.

Prog. No.	Name.	Classification.				Service			Remarks.
		Designation.	Subclass.	Grade.	Rate of Pay.	Since last appointed.	Prior to Date last appointed.	For Superannuation Purposes.	
					£ s. d.	Y. M.	Y. M.	Y. M.	
7	Willett, G. H.	Machinist (iron)	4	1	0 10 0 per diem	23 1	..	23 1	
8	Murton, J. H.	„ „	4	1	0 10 0 „	19 11	..	19 11	
9	Round, W.	„ „	4	1	0 10 0 „	22 5	10 4	32 0	
10	Cross, C. W.	„ „	4	1	0 10 0 „	26 7	..	..	
11	Armstrong, J. L.	„ „	4	1	0 10 0 „	29 3	..	29 3	
12	McKenzie, A. R. W.	„ „	4	1	0 10 0 „	23 0	..	23 0	
13	Chegwin, J. H. B.	„ „	4	1	0 10 0 „	26 7	..	26 7	
14	Pooley, J.	„ „	4	1	0 10 0 „	32 2	..	32 2	
15	Price, T.	„ „	4	1	0 10 0 „	19 3	5 10	19 3	
16	Smith, J. C.	„ „	4	1	0 10 0 „	28 4	..	28 4	
17	McLachlan, D. R.	„ „	4	1	0 10 0 „	17 3	..	17 3	
18	Gedye, E. F.	„ „	4	1	0 10 0 „	21 0	..	21 0	
19	Donaldson, J. G.	„ „	4	1	0 10 0 „	23 4	..	23 4	
20	Cook, J.	„ „	4	1	0 10 0 „	21 9	..	21 9	
21	Ronson, G. R.	„ „	4	1	0 10 0 „	20 6	0 9	20 6	
22	Cairns, P. E.	„ „	4	1	0 10 0 „	20 2	..	20 2	
23	Devlin, W.	„ „	4	1	0 10 0 „	11 0	5 7	16 7	
24	Brodrick, P.	„ „	4	1	0 10 0 „	11 0	14 6	16 7	
25	McKenzie, D.	„ „	4	1	0 10 0 „	11 0	5 8	15 9	
26	Hoy, R. E.	„ „	4	1	0 10 0 „	11 0	4 8	..	
27	McArthur, T. S.	„ „	4	1	0 10 0 „	11 0	4 5	15 5	
28	Robertson, J.	„ „	4	1	0 10 0 „	11 0	5 8	16 8	
29	Strachan, W.	„ „	4	1	0 10 0 „	11 0	5 0	16 0	
30	Aisher, J.	„ „	4	1	0 10 0 „	23 6	..	23 6	
31	Robinson, R. J.	„ „	4	1	0 10 0 „	25 8	..	25 8	
32	Nolan, P. M.	„ „	4	1	0 10 0 „	18 3	..	18 3	
33	Campbell, E. N.	„ „	4	1	0 10 0 „	11 0	5 9	16 9	
34	Fyfe, A. C.	„ „	4	1	0 10 0 „	11 0	6 3	16 2	
35	Patton, H.	„ „	4	1	0 10 0 „	23 8	..	23 8	
36	Curle, C. C.	„ „	4	1	0 10 0 „	11 0	5 10	16 10	
37	Warrington, J. E.	„ „	4	1	0 10 0 „	11 0	5 8	16 0	
38	O'Brien, P.	„ „	4	1	0 10 0 „	18 7	..	18 7	
39	Keith, J. R.	„ „	4	1	0 10 0 „	11 0	4 10	..	
40	Corles, R. L.	„ „	4	1	0 10 0 „	11 0	3 6	14 6	
41	O'Sullivan, M.	„ „	4	1	0 10 0 „	11 0	5 8	16 8	
42	Davie, R. W.	„ „	4	1	0 10 0 „	7 0	8 6	15 6	
43	Bean, C.	„ „	4	1	0 10 0 „	23 10	0 1	..	
44	Selwood, G. H.	„ „	4	1	0 10 0 „	11 0	4 4	15 4	
45	Clark, F.	„ „	4	1	0 10 0 „	22 1	..	22 1	
46	Burns, A.	„ „	4	1	0 10 0 „	6 0	9 2	15 2	
47	Gubbins, G.	„ „	4	1	0 10 0 „	6 0	8 6	14 6	
48	Bain, T.	„ „	4	1	0 10 0 „	6 0	7 9	13 7	
49	Hewson, S. W.	„ „	4	1	0 10 0 „	6 0	7 2	13 2	
50	Black, E. H. C.	„ „	4	1	0 10 0 „	6 0	7 1	13 1	
51	Curle, G. H.	„ „	4	1	0 10 0 „	6 0	6 5	12 2	
52	McAnally, C.	„ „	4	1	0 10 0 „	6 0	5 6	11 6	
53	Empson, J. A.	„ „	4	1	0 10 0 „	6 0	5 5	11 5	
54	McNally, J.	„ „	4	1	0 10 0 „	6 0	8 0	14 0	
55	Martin, A.	„ „	4	1	0 10 0 „	19 10	..	19 10	
56	Mathie, J. A.	„ „	4	1	0 10 0 „	11 0	4 0	14 8	
57	Hennessy, A.	„ „	4	1	0 10 0 „	11 0	4 5	15 5	
58	Tomkies, B. E.	„ „	4	1	0 10 0 „	11 0	3 3	..	
59	Ryall, E.	„ „	4	1	0 10 0 „	7 0	7 6	14 6	
60	Ewbank, H.	„ „	4	1	0 10 0 „	11 0	3 5	14 5	
61	Wakely, R. R.	„ „	4	1	0 10 0 „	6 0	9 0	15 0	
62	Burns, D. G.	„ „	4	1	0 10 0 „	6 0	7 6	12 11	
63	Bourke, M.	„ „	4	1	0 10 0 „	6 0	6 3	12 3	
64	Willcox, A. A.	„ „	4	1	0 10 0 „	6 0	5 5	11 5	
65	Syme, A.	„ „	4	1	0 10 0 „	6 0	5 5	11 5	
66	Bowman, C. R.	„ „	4	1	0 10 0 „	11 0	3 9	14 9	
67	Collins, H. J.	„ „	4	1	0 10 0 „	6 0	7 5	13 5	
68	Currie, R. R.	„ „	4	1	0 10 0 „	4 4	15 8	20 0	
69	Smith, J. W.	„ „	4	1	0 10 0 „	4 4	14 6	18 7	
70	Everett, M.	„ „	4	1	0 10 0 „	11 0	4 5	15 5	
71	Sayer, H.	„ „	4	1	0 10 0 „	11 0	3 3	14 3	
72	Bracewell, G. P. J.	„ „	4	1	0 10 0 „	11 0	2 8	13 8	
73	Crighton, J. A.	„ „	4	1	0 10 0 „	7 0	3 8	10 8	
74	Conroy, F. W.	„ „	4	1	0 10 0 „	12 6	..	12 6	
75	Hobson, T. C.	„ „	4	1	0 10 0 „	11 0	4 0	14 8	
76	Titchener, H. F.	„ „	4	1	0 10 0 „	11 0	3 7	14 7	
77	Hill, H. W.	„ „	4	1	0 10 0 „	6 0	7 6	13 4	
78	Purvis, F. L.	„ „	4	1	0 10 0 „	6 0	6 7	12 7	
79	Lancaster, H. E.	„ „	4	1	0 10 0 „	6 0	5 7	11 7	
80	Gordon, M. W.	„ „	4	1	0 10 0 „	11 0	3 0	14 0	
81	Griffiths, W. M.	„ „	4	1	0 10 0 „	6 0	8 2	14 2	
82	Souter, T. P.	„ „	4	1	0 10 0 „	6 0	5 3	11 3	
83	Warrington, W. J.	„ „	4	1	0 10 0 „	7 0	5 6	12 6	

RAILWAY DEPARTMENT CLASSIFICATION, 1913—*continued.*

SECOND DIVISION—*continued.*

Class 2: Locomotive—continued.

Prog. No.	Name.	Classification.				Service			Remarks.
		Designation.	Subclass.	Grade.	Rate of Pay.	Since last appointed.	Prior to Date last appointed.	For Superannuation Purposes.	
					£ s. d.	Y. M.	Y. M.	Y. M.	
84	Robertson, F. W. ..	Machinist (iron) ..	4	1	0 10 0 per diem	5 0	5 11	10 11	
85	Ballantine, J... ..	〃 〃 ..	4	1	0 10 0 〃	30 4	..	30 4	
86	Robinson, W. H. ..	〃 〃 ..	4	1	0 10 0 〃	4 4	6 9	11 1	
87	Elliott, J.	〃 〃 ..	4	1	0 10 0 〃	3 0	6 11	9 11	
88	Smyrk, E. W... ..	〃 〃 ..	4	1	0 10 0 〃	2 0	9 9	9 0	
89	Paull, J.	〃 〃 ..	4	1	0 10 0 〃	37 4	..	37 4	
90	Brooks, G.	〃 〃 ..	4	1	0 10 0 〃	23 0	..	23 0	
91	Dickison, D.	〃 〃 ..	4	1	0 10 0 〃	11 0	4 8	15 8	
92	Finch, W. G... ..	〃 〃 ..	4	1	0 10 0 〃	11 0	3 6	14 6	
93	Carlyle, O. T... ..	〃 〃 ..	4	1	0 10 0 〃	13 7	3 2	16 9	
94	Lister, S.	〃 〃 ..	4	1	0 10 0 〃	6 0	8 2	14 2	
95	Fuller, W. B... ..	〃 〃 ..	4	1	0 10 0 〃	11 0	1 6	12 6	
96	Anderson, D. K. ..	〃 〃 ..	4	1	0 10 0 〃	10 1	0 6	10 7	
97	Dawson, H.	〃 〃 ..	4	1	0 10 0 〃	4 4	2 3	6 7	
98	Wallis, R.	〃 〃 ..	4	1	0 10 0 〃	6 0	5 2	11 2	
99	Farnan, H.	〃 〃 ..	4	1	0 10 0 〃	3 0	9 7	9 8	
100	Boyce, H. B.	〃 〃 ..	4	1	0 10 0 〃	2 0	7 0	9 0	
101	Osmond, W. H. ..	〃 〃 ..	4	1	0 10 0 〃	1 0	5 10	1 0	
102	Hannan, J. P. ..	〃 〃 ..	4	1	0 10 0 〃	1 0	5 5	..	
103	Emery, C. J.	〃 〃 ..	4	1	0 10 0 〃	19 5	..	19 5	
104	Streeter, J.	〃 〃 ..	4	1	0 10 0 〃	11 0	4 1	15 1	
105	Church, J. C... ..	〃 (sewing) ..	4	1	0 10 0 〃	19 11	..	19 11	
106	Mitchell, W. H. ..	〃 〃 ..	4	1	0 10 0 〃	11 0	7 6	13 5	
107	Smith, W. D... ..	〃 (iron) ..	4	1	0 10 0 〃	6 0	5 11	11 8	
1	Broome, C. H. ..	〃 〃 ..	4	2	0 10 0 〃	23 9	2 7	23 9	
2	Woollett, W.	〃 〃 ..	4	2	0 10 0 〃	35 2	0 7	35 2	
3	Harrington, M. J. ..	〃 〃 ..	4	2	0 9 6 〃	11 0	5 8	14 8	
4	Cannon, T. J... ..	〃 〃 ..	4	2	0 9 6 〃	7 0	4 1	11 1	
5	Bowman, J. B. ..	〃 〃 ..	4	2	0 9 6 〃	3 0	6 4	9 4	
6	Smith, N. R.	〃 〃 ..	4	2	0 9 6 〃	1 0	7 2	1 0	
7	Sullivan, J.	〃 〃 ..	4	2	0 9 6 〃	1 0	5 10	1 0	
8	Priest, D. O.	〃 〃 ..	4	2	0 9 6 〃	1 0	5 8	1 0	
9	Kitchen, A.	〃 〃 ..	4	2	0 9 6 〃	1 0	5 6	6 6	
10	Hughes, G.	〃 〃 ..	4	2	0 9 6 〃	12 8	1 7	14 3	
11	Warnock, J.	〃 〃 ..	4	2	0 9 6 〃	1 day	6 0	..	
12	Milburn, R.	〃 〃 ..	4	2	0 9 6 〃	1 〃	5 9	..	
13	Tucker, L.	〃 〃 ..	4	2	0 9 6 〃	1 〃	5 9	..	
14	Withey, H. J. ..	〃 〃 ..	4	2	0 9 6 〃	1 〃	5 8	..	
15	Roach, W. R. ..	〃 〃 ..	4	2	0 9 6 〃	1 〃	5 6	..	
16	Brown, B.	〃 〃 ..	4	2	0 9 6 〃	1 〃	5 3	..	
17	Henderson, L. ..	〃 〃 ..	4	2	0 9 6 〃	1 〃	5 1	..	
18	Bateman, H. O. ..	〃 〃 ..	4	2	0 9 6 〃	5 8	..	5 8	
1	Watson, D.	Forgeman	6	..	0 15 0 〃	19 6	6 10	19 6	
2	Waddell, R.	〃	6	..	0 15 0 〃	11 0	4 8	15 8	
1	Grenfell, R.	Helper	6	1	0 10 6 〃	24 11	..	24 11	
2	Thomson, A.	Furnaceman	6	1	0 10 6 〃	11 0	2 0	13 0	
3	Thomas, R. J... ..	〃	6	1	0 10 6 〃	11 0	0 8	11 8	
4	Williams, I.	〃	6	1	0 10 6 〃	6 0	5 8	11 8	
5	Garner, J.	〃	6	1	0 10 6 〃	27 8	..	27 8	
6	Heaven, A. R. ..	Helper	6	1	0 10 6 〃	11 0	4 0	15 0	
7	Richards, H.	Furnaceman	6	1	0 10 6 〃	6 0	8 5	14 5	
8	Johnston, A.	〃	6	1	0 10 6 〃	20 7	..	20 7	
9	Ball, E.	Helper	6	1	0 10 6 〃	6 0	5 9	11 9	
10	Johnston, G.	〃	6	1	0 10 6 〃	6 0	5 7	11 5	
11	Ritchie, D.	〃	6	1	0 10 6 〃	2 0	11 7	8 7	
12	Smith, R.	〃	6	1	0 10 0 〃	6 0	10 8	13 5	
13	Vartha, J. L.	Furnaceman	6	1	0 10 6 〃	1 day	5 4	..	
1	Bland, J.	Striker	5	1	0 10 0 〃	6 0	8 2	14 2	
2	Monkman, E. W. ..	〃	5	1	0 10 0 〃	20 9	..	20 9	
3	McNeil, J. D. ..	Leading Labourer ..	7	..	0 10 0 〃	6 0	8 4	14 4	
4	Neilson, E. L. ..	Striker	5	1	0 10 0 〃	19 10	..	19 10	
5	McCarthy, J. J. ..	Fettler	5	1	0 10 0 〃	11 0	2 1	13 1	
6	Mahoney, D.	Striker	5	1	0 10 0 〃	28 0	3 0	28 0	
7	Streeter, D. C. ..	〃	5	1	0 10 0 〃	23 8	..	23 8	
8	Patterson, A.	〃	5	1	0 10 0 〃	37 6	..	37 6	
9	Chambers, W. C. ..	〃	5	1	0 10 0 〃	31 2	..	31 2	
10	Rose, A.	〃	5	1	0 10 0 〃	27 0	2 6	27 0	
11	Chaplin, H.	Leading Labourer ..	7	..	0 10 0 〃	31 6	0 7	31 6	
12	Wright, H. J... ..	Striker	5	1	0 10 0 〃	27 4	..	27 4	
13	Grammer, J.	〃	5	1	0 10 0 〃	24 2	2 8	24 2	
14	Byrnes, W.	Leading Labourer ..	7	..	0 10 0 〃	28 0	..	28 0	
15	Carmichael, T. H. ..	Holder-up	5	1	0 10 0 〃	25 1	5 5	25 1	
16	Ibbertson, J.	〃	5	1	0 10 0 〃	24 1	..	24 1	

Railway Department Classification, 1913—*continued.*

SECOND DIVISION—*continued.*

Class 2: Locomotive—continued.

Prog. No.	Name.	Classification.				Service			Remarks.
		Designation.	Subclass.	Grade.	Rate of Pay	Since last appointed.	Prior to Date last appointed.	For Superannuation Purposes.	
					£ s. .	Y. M.	Y. M.	Y. M.	
17	Baumber, J. H.	Striker	5	1	0 10 per diem	20 9	..	20 9	
18	Hoskins, E. A.	„	5	1	0 10 0 „	19 9	1 0	19 9	
19	Reed, J.	„	5	1	0 10 0 „	28 10	..	28 10	
20	Hennessy, M.	„	5	1	0 10 0 „	22 4	0 11	23 3	
21	Clareburt, R.	Holder-up	5	1	0 10 0 „	22 10	..	22 10	
22	Wilson, R.	Striker	5	1	0 10 0 „	23 7	0 1	23 7	
23	Pettett, G. J.	Leading Labourer	7	..	0 10 0 „	20 9	..	20 9	
24	Henderson, W. J.	Striker	5	1	0 10 0 „	24 11	..	24 11	
25	Edwards, W.	Leading Labourer	7	..	0 10 0 „	18 2	3 6	18 2	
26	Bradshaw, M.	„	7	..	0 10 0 „	19 1	..	..	
27	Glackin, J.	Striker	5	1	0 10 0 „	31 5	6 0	31 5	
28	Christopher, S.	„	5	1	0 10 0 „	27 4	0 4	27 4	
29	Keegan, P.	„	5	1	0 10 0 „	11 0	11 7	17 6	
30	Bone, G. T.	„	5	1	0 10 0 „	11 0	7 7	..	
31	Moore, W.	„	5	1	0 10 0 „	11 0	11 5	16 9	
32	Laurie, W.	„	5	1	0 10 0 „	11 0	5 7	16 7	
33	Whelan, D.	„	5	1	0 10 0 „	11 0	5 2	16 2	
34	McMillan, J.	„	5	1	0 10 0 „	11 0	5 2	16 2	
35	Titchener, W. J.	„	5	1	0 10 0 „	11 0	5 1	16 1	
36	Hand, J. H. W. J. T.	„	5	1	0 10 0 „	11 0	4 9	15 9	
37	Swinton, D.	„	5	1	0 10 0 „	11 0	4 9	15 9	
38	King, C. F.	„	5	1	0 10 0 „	11 0	13 9	15 9	
39	Bowden, J. R.	„	5	1	0 10 0 „	11 0	4 10	15 8	
40	Cooper, J.	Holder-up	5	1	0 10 0 „	11 0	5 7	15 8	
41	Benn, H.	Striker	5	1	0 10 0 „	11 0	5 4	15 8	
42	Cronin, J. M.	„	5	1	0 10 0 „	11 0	5 2	15 8	
43	George, W. G.	„	5	1	0 10 0 „	11 0	4 6	15 6	
44	Grainger, W. H.	Holder-up	5	1	0 10 0 „	11 0	4 6	15 6	
45	Emmerson, T.	„	5	1	0 10 0 „	11 0	4 6	15 6	
46	Dempsey, J.	Striker	5	1	0 10 0 „	11 0	5 3	15 4	
47	Clark, C.	Holder-up	5	1	0 10 0 „	11 0	4 0	15 0	
48	Wells, G. H.	„	5	1	0 10 0 „	11 0	2 0	13 0	
49	Hanna, J.	Striker	5	1	0 10 0 „	18 2	9 9	18 2	
50	Smith, F. C.	„	5	1	0 10 0 „	29 2	2 3	29 2	
51	Smith, J.	„	5	1	0 10 0 „	11 0	6 3	17 3	
52	Unwin, F. B.	„	5	1	0 10 0 „	11 0	11 3	17 0	
53	McFarlane, W.	„	5	1	0 10 0 „	11 0	4 11	15 9	
54	Wisdom, H.	„	5	1	0 10 0 „	10 0	4 3	14 3	
55	Williams, T. P.	„	5	1	0 10 0 „	19 8	..	19 8	
56	Williams, A. P.	„	5	1	0 10 0 „	19 9	..	19 9	
57	Gunner, H. P.	„	5	1	0 10 0 „	11 0	3 11	14 8	
58	Allan, L.	Holder-up	5	1	0 10 0 „	11 0	8 7	15 6	
59	Boyce, A. F.	Striker	5	1	0 10 0 „	11 0	4 3	14 8	
60	Rule, W. A.	Holder-up	5	1	0 10 0 „	11 0	3 5	14 5	
61	Paris, F.	Striker	5	1	0 10 0 „	14 11	0 3	15 2	
62	Gilchrist, A.	„	5	1	0 10 0 „	11 0	4 2	15 2	
63	Hayes, P. J.	„	5	1	0 10 0 „	11 0	4 2	13 6	
64	Dalgleish, A.	Holder-up	5	1	0 10 0 „	11 0	2 3	13 2	
65	Solomon, N.	„	5	1	0 10 0 „	11 0	5 2	12 7	
66	Galvin, E. M.	Striker	5	1	0 10 0 „	17 3	..	17 3	
67	Mattson, H. M.	Holder-up	5	1	0 10 0 „	11 7	..	11 7	
68	Regan, T.	Striker	5	1	0 10 0 „	7 0	7 5	14 5	
69	Stewart, G. G.	„	5	1	0 10 0 „	7 0	7 4	13 11	
70	Bower, J. W.	„	5	1	0 10 0 „	7 0	6 5	13 5	
71	Watson, W. A.	„	5	1	0 10 0 „	7 0	6 2	13 2	
72	Saggers, E.	Fettler	5	1	0 10 0 „	7 0	5 10	12 10	
73	Wood, W. H.	„	5	1	0 10 0 „	7 0	4 11	11 11	
74	Jones, J. C.	Striker	5	1	0 10 0 „	11 0	3 4	14 3	
75	Daley, M.	„	5	1	0 10 0 „	11 0	3 2	14 2	
76	Calogaras, N.	„	5	1	0 10 0 „	11 0	3 7	14 7	
77	Graham, W.	„	5	1	0 10 0 „	27 10	..	27 10	
78	Kurth, W. A. R.	Holder-up	5	1	0 10 0 „	11 0	2 1	13 1	
79	Colville, G.	Striker	5	1	0 10 0 „	11 0	2 1	13 1	
80	Hamilton, W.	„	5	1	0 10 0 „	6 0	9 0	14 8	
81	Carpenter, J.	„	5	1	0 10 0 „	6 0	8 6	14 6	
82	Knight, W. H.	Holder-up	5	1	0 10 0 „	6 0	7 3	13 3	
83	Moody, G.	„	5	1	0 10 0 „	6 0	7 1	13 1	
84	Halloran, M.	Striker	5	1	0 10 0 „	6 0	7 1	13 1	
85	Ward, P.	„	5	1	0 10 0 „	6 0	7 1	13 1	
86	Moss, J. H.	„	5	1	0 10 0 „	6 0	6 11	12 11	
87	Curtayne, W.	„	5	1	0 10 0 „	6 0	6 7	12 7	
88	Smith, W. L.	„	5	1	0 10 0 „	6 0	6 6	12 6	
89	Harrop, C.	„	5	1	0 10 0 „	6 0	6 6	12 6	
90	Grierson, A.	„	5	1	0 10 0 „	6 0	6 4	12 4	
91	Kettle, J. G.	„	5	1	0 10 0 „	6 0	6 2	12 2	
92	Brodie, J.	„	5	1	0 10 0 „	6 0	6 0	12 0	
93	Trautvetter, A.	„	5	1	0 10 0 „	11 0	3 8	14 8	

RAILWAY DEPARTMENT CLASSIFICATION, 1913—*continued.*

SECOND DIVISION—*continued.*

Class 2: Locomotive—continued.

Prog. No.	Name.	Classification.				Service			Remarks.
		Designation.	Subclass.	Grade.	Rate of Pay.	Since last appointed.	Prior to Date last appointed.	For Superannuation Purposes.	
					£ s. d.	Y. M.	Y. M.	Y. M.	
94	Wilson, H. G. S.	Striker	5	1	0 10 0 per diem	11 0	3 4	14 4	
95	Broberg, W. G.	„	5	1	0 10 0 „	5 0	5 5	10 5	
96	Morrison, G.	Holder-up	5	1	0 10 0 „	5 0	5 3	10 3	
97	Sinclair, J.	Striker	5	1	0 10 0 „	4 4	14 9	16 7	
98	Mundle, A. E.	„	5	1	0 10 0 „	4 4	7 8	12 0	
99	Jones, W. J.	„	5	1	0 10 0 „	4 4	4 7	8 11	
100	Greenwood, J.	Leading Labourer	7	..	0 10 0 „	30 8	3 8	30 8	
101	Walker, A.	Holder-up	5	1	0 10 0 „	11 0	4 0	14 8	
102	Williams, G. E.	Striker	5	1	0 10 0 „	7 0	6 2	13 2	
103	Gibson, A. W.	Holder-up	5	1	0 10 0 „	12 0	3 4	15 4	
104	Jarrett, J. E.	Striker	5	1	0 10 0 „	6 0	6 6	12 6	
105	Horan, T. J.	„	5	1	0 10 0 „	6 0	6 5	12 5	
106	Hawke, F.	„	5	1	0 10 0 „	6 0	5 5	11 5	
107	O'Leary, K.	Holder-up	5	1	0 10 0 „	6 0	6 1	12 1	
108	Price, J.	„	5	1	0 10 0 „	11 0	2 3	13 3	
109	Crisp, T.	Striker	5	1	0 10 0 „	20 0	0 2	20 2	
110	Mussen, L.	„	5	1	0 10 0 „	9 10	..	9 10	
111	Keating, T.	„	5	1	0 10 0 „	3 0	6 10	9 10	
112	Clark, W. H.	„	5	1	0 10 0 „	3 0	6 8	9 8	
113	Freeman, H.	„	5	1	0 10 0 „	3 0	6 8	9 8	
114	Corrigan, H. M.	Holder-up	5	1	0 10 0 „	13 1	2 4	15 5	
115	McPherson, D. B.	Striker	5	1	0 10 0 „	6 0	6 9	12 9	
116	Finnerty, J. J.	Holder-up	5	1	0 10 0 „	14 0	..	14 0	
117	Robbins, J. T.	„	5	1	0 10 0 „	14 10	1 7	15 7	
118	Waite, J. R.	Striker	5	1	0 10 0 „	4 4	3 8	8 0	
119	Keeble, S. J.	Holder-up	5	1	0 10 0 „	4 4	5 10	10 2	
120	Woolston, A. E.	„	5	1	0 10 0 „	4 4	1 8	6 0	
121	Guthrie, J. P.	Striker	5	1	0 10 0 „	3 0	6 4	9 4	
122	Unwin, W.	„	5	1	0 10 0 „	2 0	10 7	9 1	
123	Jones, D.	Leading Labourer	7	..	0 10 0 „	31 5	..	31 5	
124	Melville, J. R.	Holder-up	5	1	0 10 0 „	11 1	..	11 1	
125	Douglas, A.	Striker	5	1	0 10 0 „	5 0	5 0	10 0	
126	McGrath, E.	Holder-up	5	1	0 10 0 „	8 8	0 9	9 5	
127	Trengrove, R. J.	Striker	5	1	0 10 0 „	2 0	7 1	9 1	
128	McDonagh, H. E.	Holder-up	5	1	0 10 0 „	2 0	9 6	9 0	
129	Bennett, W.	Striker	5	1	0 10 0 „	2 0	6 7	8 7	
130	Challis, B.	„	5	1	0 10 0 „	1 0	6 11	1 0	
131	Wills, F. E.	„	5	1	0 10 0 „	1 0	6 9	1 0	
132	Reedy, W. J.	„	5	1	0 10 0 „	1 0	8 9	7 7	
133	Talbot, W.	„	5	1	0 10 0 „	1 0	9 6	1 0	
134	Cornish, C. N. A.	Holder-up	5	1	0 10 0 „	1 0	5 10	1 0	
135	McCormick, J.	„	5	1	0 10 0 „	1 0	5 9	6 9	
136	Grofski, A. R.	Striker	5	1	0 10 0 „	1 0	5 9	1 0	
137	Fibbs, W.	Holder-up	5	1	0 10 0 „	1 0	5 8	1 0	
138	Fenn, E. G.	„	5	1	0 10 0 „	1 0	9 1	1 0	
139	Armstrong, T. A.	Striker	5	1	0 10 0 „	1 0	5 7	1 0	
140	Rogers, A.	Holder-up	5	1	0 10 0 „	1 0	5 6	1 0	
141	Burns, R. T.	Striker	5	1	0 10 0 „	1 0	5 5	6 5	
142	Hastedt, K. G.	Holder-up	5	1	0 10 0 „	7 9	..	7 9	
143	Porter, J.	„	5	1	0 10 0 „	21 9	..	21 9	
144	Arrol, J.	Striker	5	1	0 10 0 „	1 day	6 8	..	
145	Cockburn, T. H.	Fettler	5	1	0 10 0 „	1 „	6 0	..	
146	Jacobs, H. J. T.	Holder-up	5	1	0 10 0 „	1 „	5 11	..	
147	Fraser, G. F.	„	5	1	0 10 0 „	1 „	5 11	..	
148	Pope, R. J.	Striker	5	1	0 10 0 „	1 „	5 10	..	
149	Lear, H.	„	5	1	0 10 0 „	1 „	8 8	..	
150	MacPherson, J. M.	„	5	1	0 10 0 „	1 „	5 9	..	
151	Croy, A.	Holder-up	5	1	0 10 0 „	1 „	5 9	..	
152	Murray, A.	„	5	1	0 10 0 „	1 „	5 8	..	
153	Jacobs, W. C.	„	5	1	0 10 0 „	1 „	5 7	..	
154	Kinaston, J. M.	„	5	1	0 10 0 „	1 „	5 6	..	
155	Lovett, J.	„	5	1	0 10 0 „	1 „	5 6	..	
156	Henderson, C. J.	Striker	5	1	0 10 0 „	1 „	5 2	..	
157	O'Brien, W. A.	„	5	1	0 10 0 „	1 „	5 1	..	
1	Blackie, A.	Skilled Labourer	7	..	0 9 6 „	11 0	3 0	13 11	
2	Roe, D. J.	„	7	..	0 9 6 „	11 6	..	11 6	
3	Bevege, H. G.	„	7	..	0 9 6 „	31 10	..	31 10	
4	Conaghan, S.	Striker	5	2	0 9 6 „	29 0	..	29 0	
5	Duffy, C. J.	Skilled Labourer	7	..	0 9 6 „	32 9	..	32 9	
6	Stephens, R.	„	7	..	0 9 6 „	28 10	2 2	28 10	
7	Thompson, H. W.	„	7	..	0 9 6 „	11 7	..	11 7	
8	McBeath, M. A.	„	7	..	0 9 6 „	11 0	3 7	14 7	
9	Blewett, W.	„	7	..	0 9 6 „	32 3	0 9	32 3	
10	King, T. G.	„	7	..	0 9 6 „	27 2	5 8	27 2	
11	Batchelor, U. W.	„	7	..	0 9 6 „	11 0	1 10	12 10	
12	Patton, J. B.	„	7	..	0 9 6 „	10 0	2 8	12 8	

RAILWAY DEPARTMENT CLASSIFICATION, 1913—*continued.*

SECOND DIVISION—*continued.*

Class 2: Locomotive—continued.

Prog. No.	Name.	Classification.				Service			Remarks
		Designation.	Subclass.	Grade.	Rate of Pay.	Since last appointed.	Prior to Date last appointed.	For Superannuation Purposes.	
					£ s. d.	Y. M.	Y. M.	Y. M.	
13	Stewart, G.	Skilled Labourer	7	..	0 9 6 per diem	30 10	1 6	30 10	
14	Fletcher, T.	„	7	..	0 9 6 „	26 8	11 2	26 8	
15	Gabbott, J.	„	7	..	0 9 6 „	6 0	6 11	12 11	
16	Morey, W. T.	„	7	..	0 9 6 „	6 0	6 11	12 11	
17	Tash, C.	„	7	..	0 9 6 „	19 10	0 4	20 2	
18	Arnott, W. H.	„	7	..	0 9 6 „	11 0	2 0	13 0	
19	Edwards, D.	„	7	..	0 9 6 „	27 2	4 0	27 2	
20	Patterson, W. P.	Holder-up	5	2	0 9 6 „	10 0	2 8	12 8	
21	Hewitt, W. A.	Skilled Labourer	7	..	0 9 6 „	29 4	1 11	29 4	
22	Rickards, W.	„	7	..	0 9 6 „	28 11	..	28 11	
23	Caddie, D.	„	7	..	0 9 6 „	11 0	4 3	14 8	
24	Neazor, W.	„	7	..	0 9 6 „	33 1	..	33 1	
25	Tohill, J.	„	7	..	0 9 6 „	30 2	..	30 2	
26	McNeill, F.	„	7	..	0 9 6 „	11 0	3 6	14 6	
27	Hoare, E. J.	„	7	..	0 9 6 „	5 0	5 4	10 1	
28	Bray, C.	„	7	..	0 9 6 „	19 4	..	19 4	
29	Morris, A. H.	Holder-up	5	2	0 9 6 „	7 7	..	7 7	
30	Cross, S. W.	Skilled Labourer	7	..	0 9 6 „	7 0	3 4	10 4	
31	Tolhurst, F. E.	„	7	..	0 9 6 „	4 4	2 10	7 2	
32	Parker, J. J. L.	Holder-up	5	2	0 9 6 „	2 0	7 0	9 0	
33	Whitley, B.	Skilled Labourer	7	..	0 9 6 „	2 0	6 8	8 8	
34	Tyer, C. H.	„	7	..	0 9 6 „	6 11	..	6 11	
35	Surman, J.	Fettler	5	2	0 9 6 „	5 6	1 5	6 10	
36	O'Connor, A.	Striker	5	2	0 9 6 „	28 6	..	28 6	
37	Anderson, S. C. R.	Skilled Labourer	7	..	0 9 6 „	1 0	7 0	1 0	
38	Miller, W.	Striker	5	2	0 9 6 „	1 0	5 8	1 0	
39	Gray, W. F.	„	5	2	0 9 6 „	6 3	1 1	7 4	
40	Baldwin, R. S.	„	5	2	0 9 6 „	6 11	..	6 11	
41	Ryan, T.	Fettler	5	2	0 9 6 „	2 0	10 3	9 0	
42	Schahill, E.	„	5	2	0 9 6 „	4 4	4 8	9 0	
43	Kirton, T.	Striker	5	2	0 9 6 „	1 0	5 10	1 0	
44	McIntyre, A. H.	„	5	2	0 9 6 „	1 0	5 8	6 8	
45	Smith, W. L.	„	5	2	0 9 6 „	1 0	5 5	6 5	
46	Andrews, F. W.	„	5	2	0 9 6 „	5 0	..	5 0	
47	Swanson, A. G. A.	„	5	2	0 9 6 „	1 day	5 11	..	
48	Bull, E. E. T.	Skilled Labourer	7	..	0 9 6 „	1 „	5 9	..	
49	Saunders, W. P.	„	7	..	0 9 6 „	1 „	5 9	..	
50	Tims, F. S. V.	Striker	5	2	0 9 6 „	1 „	5 7	..	
51	Barratt, W.	Skilled Labourer	7	..	0 9 6 „	1 „	5 5		
52	Mooney, H.	Striker	5	2	0 9 6 „	1 „	5 4	..	
53	Nicholls, W. G.	„	5	2	0 9 6 „	1 „	5 3	..	
54	Booth, J. W.	Skilled Labourer	7	..	0 9 6 „	1 „	5 10	..	
55	Parker, W. H.	Striker	5	2	0 9 6 „	1 „	5 3	..	
56	Davis, J. A.	„	5	2	0 9 6 „	1 „	5 2	..	
57	Taylor, J. J.	„	5	2	0 9 6 „	1 „	5 0	..	
1	Carrick, W. A.	Labourer	7	..	0 9 0 „	29 1	..	29 1	
2	Walsh, W. N. V.	„	7	..	0 9 0 „	1 0	6 0	7 0	
3	Robb, T.	„	7	..	0 9 0 „	28 11	..	28 11	
4	Lammas, A. E.	„	7	..	0 9 0 „	7 8	0 3	7 11	
5	Donnelly, T.	„	7	..	0 9 0 „	15 1	..	15 1	
6	Sloan, M. J.	„	7	..	0 9 0 „	2 0	7 1	9 1	
7	Flynn, M. J.	„	7	..	0 9 0 „	11 0	5 11	16 11	
8	Rourke, J.	„	7	..	0 9 0 „	38 1	..	38 1	
9	McGuiness, J.	„	7	..	0 9 0 „	19 11	..	19 11	
10	Sinclair, W.	„	7	..	0 9 0 „	34 1	..	34 1	
11	Cronin, M.	„	7	..	0 9 0 „	26 9	..	26 9	
12	Messenger, T. A.	„	7	..	0 9 0 „	33 7	..	33 7	
13	Cadman, W. H.	„	7	..	0 9 0 „	22 0	..	22 0	
14	Veint, J.	„	7	..	0 9 0 „	30 2	0 2	30 4	
15	Hall, J.	„	7	..	0 9 0 „	34 5	..	34 5	
16	Reidy, J. J.	„	7	..	0 9 0 „	29 11	1 5	29 11	
17	Monds, J.	„	7	..	0 9 0 „	29 8	..	29 8	
18	Dixon, T. F. W.	„	7	..	0 9 0 „	24 6	1 9	24 6	
19	Gilman, J.	„	7	..	0 9 0 „	21 1	1 9	22 3	
20	Kennedy, A.	„	7	..	0 9 0 „	20 1	2 1	20 3	
21	Howatson, D.	„	7	..	0 9 0 „	24 6	..	24 6	
22	Thomson, F.	„	7	..	0 9 0 „	16 5	1 0	16 5	
23	Murphy, J.	Coalman	9	..	0 9 0 „	15 7	..	15 7	
24	Milburn, J.	„	9	..	0 9 0 „	11 0	3 6	14 6	
25	Neill, W.	Labourer	7	..	0 9 0 „	11 0	3 3	14 3	
26	Barry, T.	„	7	..	0 9 0 „	11 0	1 10	12 10	
27	Murray, P.	Coalman	9	..	0 9 0 „	10 6	..	10 6	
28	Taylor, W. C.	Labourer	7	..	0 9 0 „	11 0	2 10	13 10	
29	Wallstrom, A. G.	„	7	..	0 9 0 „	9 7	0 9	10 4	
30	O'Connor, T.	„	7	..	0 9 0 „	13 7	0 1	13 8	
31	Morgan, P.	„	7	..	0 9 0 „	8 1	2 0	10 1	

RAILWAY DEPARTMENT CLASSIFICATION, 1913—*continued.*

SECOND DIVISION—*continued.*

Class 2: Locomotive—continued.

Prog. No.	Name.	Classification.				Service			Remarks.
		Designation.	Subclass.	Grade.	Rate of Pay.	Since last appointed.	Prior to Date last appointed.	For Superannuation Purposes.	
					£ s. d.	Y. M.	Y. M.	Y. M.	
32	McGregor, D.	Labourer	7	..	0 9 0 per diem	7 11	..	7 11	
33	Miller, R.	〃	7	..	0 9 0 〃	11 0	1 8	12 2	
34	McLean, D. L.	〃	7	..	0 9 0 〃	7 2	0 2	7 4	
35	Akers, R. W.	〃	7	..	0 9 0 〃	6 0	6 4	11 2	
36	Erskine, J. R.	〃	7	..	0 9 0 〃	5 10	4 8	9 4	
37	Duckworth, T.	〃	7	..	0 9 0 〃	5 3	..	5 3	
38	Hutchings, W. W.	〃	7	..	0 9 0 〃	5 0	5 3	10 3	
39	Blair, J. H.	〃	7	..	0 9 0 〃	5 0	1 0	6 0	
40	O'Hanlon, W. H.	〃	7	..	0 9 0 〃	4 9	13 6	8 10	
41	O'Gorman, D.	〃	7	..	0 9 0 〃	4 8	0 9	5 5	
42	Murphy, T.	〃	7	..	0 9 0 〃	4 6	1 3	5 9	
43	Kilgour, E. H.	〃	7	..	0 9 0 〃	3 0	12 7	13 10	
44	Carbrey, M.	〃	7	..	0 9 0 〃	27 10	..	27 10	
45	Rodden, J. P.	〃	7	..	0 9 0 〃	2 0	6 6	8 6	
46	Barr, R.	Coalman	9	..	0 9 0 〃	1 0	6 10	1 0	
47	Atkinson, J. L.	Labourer	7	..	0 9 0 〃	1 0	6 10	1 0	
48	Reed, H.	〃	7	..	0 9 0 〃	1 0	6 9	7 9	
49	Taylor, J.	〃	7	..	0 9 0 〃	1 0	6 1	7 1	
50	Sloan, W. G.	〃	7	..	0 9 0 〃	1 0	5 10	1 0	
51	Crisp, T. B.	〃	7	..	0 9 0 〃	1 0	5 3	1 0	
52	Smith, A. A.	Coalman	9	..	0 9 0 〃	1 0	5 0	6 0	
53	Clark, J.	Labourer	7	..	0 9 0 〃	4 10	0 6	4 11	
54	Harper, J. W.	〃	7	..	0 9 0 〃	4 11	..	4 11	
55	Styles, B. B. P.	Coalman	9	..	0 9 0 〃	9 11	..	9 11	
56	Leacher, F. H.	Labourer	7	..	0 9 0 〃	1 day	8 4	..	
57	Urwin, W. G.	〃	7	..	0 9 0 〃	1 〃	6 0	..	
58	Bustard, D. M.	〃	7	..	0 9 0 〃	1 〃	6 0	..	
59	Hood, W. D.	〃	7	..	0 9 0 〃	1 〃	5 11	..	
60	Siddall, C.	〃	7	..	0 9 0 〃	1 〃	6 0	..	
61	Berryman, W. E.	Coalman	9	..	0 9 0 〃	1 〃	5 10	..	
62	Kirkwood, J. C.	Labourer	7	..	0 9 0 〃	1 〃	5 9	..	
63	Connell, T. V.	〃	7	..	0 9 0 〃	1 〃	5 9	..	
64	Bailey, E. R.	〃	7	..	0 9 0 〃	1 〃	5 8	.	
65	Campbell, D.	〃	7	..	0 9 0 〃	1 〃	5 8	..	
66	Johnson, W. J.	〃	7	..	0 9 0 〃	1 〃	5 6	..	
67	Frizzell, R.	〃	7	..	0 9 0 〃	1 〃	5 4	..	
68	Stimpson, G. E.	Coalman	9	..	0 9 0 〃	1 〃	5 2	..	
69	Barber, E.	Labourer	7	..	0 9 0 〃	1 〃	5 1	..	
1	Hosie, D.	Depot Chargeman	8	..	0 14 0 〃	31 10	..	31 10	
2	Neilson, E.	〃	8	..	0 14 0 〃	34 4	..	34 4	
3	Davidson, T.	〃	8	..	0 14 0 〃	35 1	..	35 1	
4	Hall, J.	〃	8	..	0 14 0 〃	34 2	..	34 2	
5	Broad, T.	〃	8	..	0 14 0 〃	34 0	..	34 0	
6	Melles, W.	〃	8	..	0 14 0 〃	34 1	..	34 1	
7	Peters, J. D.	〃	8	..	0 14 0 〃	32 4	..	32 4	
8	Cameron, J. H.	〃	8	..	0 14 0 〃	34 2	..	34 2	
9	Wroath, W. H.	〃	8	..	0 14 0 〃	31 0	..	31 0	
10	Gardiner, M.	〃	8		0 14 0 〃	31 2	0 4	31 2	
11	McNeely, J.	〃	8	..	0 14 0 〃	28 0	4 3	28 0	
12	Mackie, A.	〃	8	..	0 14 0 〃	29 1	..	29 1	
13	Billingham, J. L.	〃	8	..	0 14 0 〃	30 10	..	30 10	
14	Johnson, E.	〃	8	..	0 14 0 〃	31 5	..	31 5	
15	Hodge, A.	〃	8	..	0 14 0 〃	30 9	..	30 9	
16	Cairns, T.	〃	8	..	0 14 0 〃	32 1	..	32 1	
17	Tracy, J.	〃	8	..	0 14 0 〃	30 7	..	30 7	
18	Cherrie, J. C.	〃	8	..	0 14 0 〃	27 7	..	27 7	
1	Cochrane, P.	Engine-driver	8	1	0 13 6 〃	39 6	..	39 6	
2	Downey, H.	〃	8	1	0 13 6 〃	38 9	..	38 9	
3	Cockroft, Art.	〃	8	1	0 13 6 〃	37 10	..	37 10	
4	Rollo, C.	〃	8	1	0 13 6 〃	37 4	..	37 4	
5	Brooker, J. G.	〃	8	1	0 13 6 〃	37 7	..	37 7	
6	Cockroft, Adin	〃	8	1	0 13 6 〃	35 8	..	35 8	
7	Smith, C.	〃	8	1	0 13 6 〃	37 2	..	37 2	
8	McEwan, S.	〃	8	1	0 13 6 〃	37 2	..	37 2	
9	Belsham, F. S.	〃	8	1	0 13 6 〃	38 1	..	38 1	
10	Travers, M.	〃	8	1	0 13 6 〃	36 1	..	36 1	
11	Adams, E.	〃	8	1	0 13 6 〃	36 0	..	36 0	
12	Ramsay, R.	〃	8	1	0 13 6 〃	35 4	..	35 4	
13	Kirby, T. H.	〃	8	1	0 13 6 〃	34 5	..	34 5	
14	Patterson, J.	〃	8	1	0 13 6 〃	35 8	..	35 8	
15	Smart, J. W.	〃	8	1	0 13 6 〃	35 0	..	35 0	
16	Paton, H.	〃	8	1	0 13 6 〃	34 7	..	34 7	
17	Brown, P. W. A.	〃	8	1	0 13 6 〃	34 3	..	34 3	
18	Barker, H.	〃	8	1	0 13 6 〃	33 9	..	33 9	
19	Peterkin, A. T.	〃	8	1	0 13 6 〃	22 6	0 4	22 6	

RAILWAY DEPARTMENT CLASSIFICATION, 1913—*continued.*

Prog. No.	Name.	Classification.				Service			Remarks
		Designation.	Subclass.	Grade.	Rate of Pay.	Since last appointed.	Prior to Date last appointed.	For Superannuation Purposes.	
		SECOND DIVISION—*continued.* *Class 2 : Locomotive*—continued.							
					£ s. d.	Y. M.	Y. M.	Y. M.	
20	Naylor, J. W.	Engine-driver	8	1	0 13 6 per diem	37 10	..	37 10	
21	Batten, W.	〃	8	1	0 13 6 〃	35 0	..	35 0	
22	Robertson, J.	〃	8	1	0 13 6 〃	35 4	..	35 4	
23	McGrath, M.	〃	8	1	0 13 6 〃	22 2	7 3	22 2	
24	Taylor, C.	〃	8	1	0 13 6 〃	22 4	12 5	34 9	
25	Coard, J.	〃	8	1	0 13 6 〃	33 3	..	33 3	
26	Hoddinott, H. J.	〃	8	1	0 13 6 〃	35 3	..	35 3	
27	Graham, A.	〃	8	1	0 13 6 〃	33 9	..	33 9	
28	Stevens, J.	〃	8	1	0 13 6 〃	33 5	..	33 5	
29	Makin, W.	〃	8	1	0 13 6 〃	32 7	..	32 7	
30	Hartle, W. G.	〃	8	1	0 13 6 〃	30 10	..	30 10	
31	Stevens, M. B.	〃	8	1	0 13 6 〃	32 0	..	32 0	
32	Hay, J.	〃	8	1	0 13 6 〃	31 4	..	31 4	
33	Hastedt, K. F.	〃	8	1	0 13 6 〃	36 2	..	36 2	
34	Penny, R.	〃	8	1	0 13 6 〃	34 0	..	34 0	
35	Cross, W.	〃	8	1	0 13 6 〃	32 10	..	32 10	
36	Banks, H.	〃	8	1	0 13 6 〃	31 4	..	31 4	
37	Jane, P. H.	〃	8	1	0 13 6 〃	31 1	..	31 1	
38	Cawley, W.	〃	8	1	0 13 6 〃	34 3	..	34 3	
39	Smith, W. T.	〃	8	1	0 13 6 〃	32 0	..	32 0	
40	Foreman, J.	〃	8	1	0 13 6 〃	31 3	..	31 3	
41	Feasey, A. B.	〃	8	1	0 13 6 〃	30 2	..	30 2	
42	Seymour, W.	〃	8	1	0 13 6 〃	29 3	..	29 3	
43	McWhinney, J. W.	〃	8	1	0 13 6 〃	28 9	..	28 9	
44	Soulsby, R.	〃	8	1	0 13 6 〃	31 0	..	31 0	
45	Hislop, J.	〃	8	1	0 13 6 〃	31 5	..	31 5	
46	Cameron, W. J.	〃	8	1	0 13 6 〃	31 3	..	31 3	
47	Huston, T. C.	〃	8	1	0 13 6 〃	31 2	..	31 2	
48	Halloran, M.	〃	8	1	0 13 6 〃	30 6	..	30 6	
49	Pye, J.	〃	8	1	0 13 6 〃	28 7	..	28 7	
50	Lee, C. G.	〃	8	1	0 13 6 〃	31 0	..	31 0	
51	Pearson, J.	〃	8	1	0 13 6 〃	30 10	..	30 10	
52	Logie, J.	〃	8	1	0 13 6 〃	30 8	..	30 8	
53	Gilpin, G.	〃	8	1	0 13 6 〃	30 6	..	30 6	
54	Roseman, R.	〃	8	1	0 13 6 〃	30 3	..	30 3	
55	Robson, J. G.	〃	8	1	0 13 6 〃	30 1	..	30 1	
56	Banks, A.	〃	8	1	0 13 6 〃	30 6	..	30 6	
57	Sherlock, A.	〃	8	1	0 13 6 〃	28 2	..	28 2	
58	Sargent, J.	〃	8	1	0 13 6 〃	22 4	15 3	37 7	
59	Webb, W.	〃	8	1	0 13 6 〃	34 0	..	34 0	
60	Mander, J.	〃	8	1	0 13 6 〃	31 0	..	31 0	
61	Martin, F. J.	〃	8	1	0 13 6 〃	29 7	0 8	29 7	
62	Lees, A.	〃	8	1	0 13 6 〃	30 0	..	30 0	
63	Erlandsson, P.	〃	8	1	0 13 6 〃	30 0	..	30 0	
64	Cameron, A.	〃	8	1	0 13 6 〃	30 3	..	30 3	
65	Calcutt, J. A.	〃	8	1	0 13 6 〃	29 3	1 1	29 3	
66	Smyth, W. J.	〃	8	1	0 13 6 〃	29 5	2 0	29 5	
67	McCurdy, D.	〃	8	1	0 13 6 〃	29 0	..	29 0	
68	Archibald, H.	〃	8	1	0 13 6 〃	29 0	..	29 0	
69	Mackie, J.	〃	8	1	0 13 6 〃	29 4	..	29 4	
70	Stewart, A. S.	〃	8	1	0 13 6 〃	28 7	..	28 7	
71	Clark, R. H.	〃	8	1	0 13 6 〃	28 10	..	28 10	
72	Wilson, W. T.	〃	8	1	0 13 6 〃	30 10	..	30 10	
73	Heard, W.	〃	8	1	0 13 6 〃	28 5	0 5	28 5	
74	McKee, A.	〃	8	1	0 13 6 〃	28 5	0 3	28 5	
75	Findlay, R.	〃	8	1	0 13 6 〃	28 2	..	28 2	
76	Hutchins, G. W.	〃	8	1	0 13 6 〃	25 3	1 2	25 3	
77	Gilder, E.	〃	8	1	0 13 6 〃	25 2	0 2	25 2	
78	Hutchins, F.	〃	8	1	0 13 6 〃	24 11	1 11	24 11	
79	Moloney, W. C.	〃	8	1	0 13 6 〃	24 7	0 4	24 7	
80	Smith, T. H. W.	〃	8	1	0 13 6 〃	24 6	0 3	24 6	
81	Wills, J.	〃	8	1	0 13 6 〃	35 3	..	35 3	
82	Boden, B.	〃	8	1	0 13 6 〃	31 2	..	31 2	
83	Reid, J.	〃	8	1	0 13 6 〃	29 7	1 0	29 7	
84	Kennedy, S.	〃	8	1	0 13 6 〃	24 4	3 3	24 4	
85	Bryden, W.	〃	8	1	0 13 6 〃	24 3	..	24 3	
86	Galloway, J.	〃	8	1	0 13 6 〃	24 5	..	24 5	
87	Parkes, A. E.	〃	8	1	0 13 6 〃	27 9	2 2	27 9	
88	Greig, W.	〃	8	1	0 13 6 〃	28 0	..	28 0	
89	Boden, T.	〃	8	1	0 13 6 〃	26 8	0 3	26 8	
90	McCalman, F.	〃	8	1	0 13 6 〃	26 8	..	26 8	
91	Moosman, A.	〃	8	1	0 13 6 〃	26 11	..	26 11	
92	Murphy, F. H.	〃	8	1	0 13 6 〃	24 6	..	24 6	
93	Martin, G. F.	〃	8	1	0 13 6 〃	24 2	..	24 2	

RAILWAY DEPARTMENT CLASSIFICATION, 1913—*continued.*

SECOND DIVISION—*continued.*

Class 2: Locomotive—continued.

Prog. No.	Name.	Classification.				Service			Remarks.
		Designation.	Subclass	Grade.	Rate of Pay.	Since last appointed.	Prior to Date last appointed.	For Superannuation Purposes.	
					£ s. d.	Y. M.	Y. M.	Y. M.	
94	Newman, C.	Engine-driver	8	1	0 13 6 per diem	24 0	..	24 0	
95	Kay, W.	„	8	1	0 13 6 „	22 5	6 1	22 5	
96	Wilson, D.	„	8	1	0 13 6 „	28 2	5 2	28 2	
97	Fisher, D.	„	8	1	0 13 6 „	22 2	0 1	22 2	
98	Wood, H.	„	8	1	0 13 6 „	26 10	..	26 10	
99	Hay, D.	„	8	1	0 13 6 „	24 1	..	24 1	
100	Findlay, D.	„	8	1	0 13 6 „	24 0	..	24 0	
101	McCullough, W.	„	8	1	0 13 6 „	23 11	..	23 11	
102	Kennelly, Jos.	Night Foreman of Cleaners	8	1	0 13 6 „	24 3	..	24 3	
103	Telfer, R. A.	Engine-driver	8	1	0 13 6 „	23 9	..	23 9	
104	Woodhead, H. E.	„	8	1	0 13 6 „	23 6	..	23 6	
105	Nisbet, A.	„	8	1	0 13 6 „	23 3	..	23 3	
106	Murdoch, G. H.	„	8	1	0 13 6 „	23 3	..	23 3	
107	McNeil, T. C.	„	8	1	0 13 6 „	23 3	..	23 3	
108	Bingham, F. J.	„	8	1	0 13 6 „	26 2	..	26 2	
109	Harrington, M. C.	„	8	1	0 13 6 „	22 11	..	22 11	
110	Evans, A. J.	„	8	1	0 13 6 „	23 2	..	23 2	
111	Large, A. J.	„	8	1	0 13 6 „	23 4	..	23 4	
112	Cooper, W. G.	„	8	1	0 13 6 „	22 9	..	22 9	
113	Gould, J.	„	8	1	0 13 6 „	22 10	..	22 10	
114	Slowey, E.	„	8	1	0 13 6 „	24 5	..	24 5	
115	Atkinson, J. H.	„	8	1	0 13 6 „	22 11	..	22 11	
116	Chisholm, L.	„	8	1	0 13 6 „	23 1	0 1	23 1	
117	Noble, A. C.	„	8	1	0 13 6 „	23 0	..	23 0	
118	Walker, J.	„	8	1	0 13 6 „	22 9	..	22 9	
119	Paterson, T. S.	„	8	1	0 13 6 „	22 9	0 5	22 9	
120	Vincent, W.	„	8	1	0 13 6 „	23 3	..	23 3	
121	Harrison, T.	„	8	1	0 13 6 „	22 8	..	22 8	
122	Hunter, W.	„	8	1	0 13 6 „	37 3	..	37 3	
123	Boyle, J.	„	8	1	0 13 6 „	29 1	..	29 1	
124	Sharkey, A. P.	„	8	1	0 13 6 „	21 10	..	21 10	
125	Sachtler, L. W.	„	8	1	0 13 6 „	27 9	..	27 9	
126	Dunford, A. S.	„	8	1	0 13 6 „	23 11	0 2	23 11	
127	Michie, D.	„	8	1	0 13 6 „	23 5	..	23 5	
128	McDonald, A.	„	8	1	0 13 6 „	23 4	..	23 4	
129	Paterson, W. K.	„	8	1	0 13 6 „	23 11	..	23 11	
130	Pringle, R.	„	8	1	0 13 6 „	22 9	..	22 9	
131	Huston, R.	„	8	1	0 13 6 „	22 8	..	22 8	
132	Moffat, J. A.	„	8	1	0 13 6 „	22 8	..	22 8	
133	McKee, R.		8	1	0 13 6 „	22 8	..	22 8	
134	Carnahan, J. M.	„	8	1	0 13 6 „	22 8	..	22 8	
135	Connett, W. J.	„	8	1	0 13 6 „	22 8	..	22 8	
136	Herbert, W. H.	„	8	1	0 13 6 „	22 8	..	22 8	
137	Wishart, A.	„	8	1	0 13 6 „	22 8	..	22 8	
138	McNeil, D.	„	8	1	0 13 6 „	22 6	..	22 6	
139	Chaplin, C. H.	„	8	1	0 13 6 „	22 8	..	22 8	
140	Watkins, F.	„	8	1	0 13 6 „	22 8	..	22 8	
141	Hopkirk, W. J.	„	8	1	0 13 6 „	22 9	..	22 9	
142	Thomson, W. W.	„	8	1	0 13 6 „	22 8	..	22 8	
143	Burtenshaw, W.	„	8	1	0 13 6 „	31 3	..	31 3	
144	Healey, J. J.	„	8	1	0 13 6 „	22 4	..	22 4	
145	Callon, R.	„	8	1	0 13 6 „	22 4	..	22 4	
146	Ahern, J.	„	8	1	0 13 6 „	22 3	..	22 3	
147	Robertson, J. K.	„	8	1	0 13 6 „	22 2	..	22 2	
148	Fisher, C. E.	„	8	1	0 13 6 „	22 1	..	22 1	
149	Johnson, A. V.	„	8	1	0 13 6 „	22 0	..	22 0	
150	Veitch, S.	„	8	1	0 13 6 „	21 9	2 5	21 9	
151	Vine, E. J.	„	8	1	0 13 6 „	22 0	..	22 0	
152	Smith, C. W.	„	8	1	0 13 6 „	22 0	..	22 0	
153	McKay, A.	„	8	1	0 13 6 „	21 10	..	21 10	
154	Colbert, F. W.	„	8	1	0 13 6 „	21 9	..	21 9	
155	Grey, E. J.	„	8	1	0 13 6 „	21 9	0 1	21 9	
156	Brown, J. T.	„	8	1	0 13 6 „	21 9	..	21 9	
157	Nickless, D. J.	„	8	1	0 13 6 „	19 5	1 6	19 5	
158	Scott, W. T.	„	8	1	0 13 6 „	19 10	..	19 10	
159	Foster, J.	„	8	1	0 13 6 „	4 4	22 4	26 8	
160	Ritchie, J. M.	„	8	1	0 13 6 „	4 4	22 8	27 0	
161	Alsop, A.	„	8	1	0 13 6 „	4 4	22 4	26 8	
162	Parnell, W.	„	8	1	0 13 6 „	4 4	21 7	25 11	
163	Davidson, J.	„	8	1	0 13 6 „	4 4	20 9	25 1	
164	Barr, J.	Night Foreman of Cleaners	8	1	0 13 6 „	4 4	22 8	27 0	
165	Andrews, W.	Engine-driver	8	1	0 13 6 „	4 4	14 4	18 8	
166	Kerins, C. H.	Night Foreman of Cleaners	8	1	0 13 6 „	4 4	17 11	22 3	
167	Flaws, T.	Engine-driver	8	1	0 13 „	34 2	..	34 2	

RAILWAY DEPARTMENT CLASSIFICATION, 1913—*continued.*

Prog. No	Name.	Classification.				Service			Remarks
		Designation.	Subclass.	Grade.	Rate of Pay.	Since last appointed.	Prior to Date last appointed.	For Superannuation Purposes.	

SECOND DIVISION—*continued.*

Class 2: Locomotive—continued.

Prog. No	Name.	Designation.	Subclass.	Grade.	Rate of Pay.	Since last appointed.	Prior to Date last appointed.	For Superannuation Purposes.	Remarks
					£ s. d.	Y. M.	Y. M.	Y. M.	
168	Hay, W.	Engine-driver	8	1	0 13 6 per diem	22 8	..	22 8	
169	Carter, B.	„	8	1	0 13 6 „	23 0	..	23 0	
170	Dalziel, P. S.	„	8	1	0 13 6 „	20 2	0 6	20 2	
171	Keegan, P.	„	8	1	0 13 6 „	21 1	..	21 1	
172	Ericson, C. E.	„	8	1	0 13 6 „	23 3	..	23 3	
173	Dawson, S. H.	Night Foreman of Cleaners	8	1	0 13 6 „	18 0	1 3	18 0	
174	Hodge, A. J.	Engine-driver	8	1	0 13 6 „	20 0	..	20 0	
175	Brown, T. H.	„	8	1	0 13 6 „	20 0	..	20 0	
176	Stone, R. J.	„	8	1	0 13 6 „	20 2	0 11	20 2	
177	Livingston, H.	„	8	1	0 13 6 „	20 0	..	20 0	
178	Higgins, M.	„	8	1	0 13 6 „	19 10	..	19 10	
179	Macfarlane, J. E.	„	8	1	0 13 6 „	20 1	..	20 1	
180	Allan, A.	„	8	1	0 13 6 „	20 8	..	20 8	
181	Pearson, G. A.	„	8	1	0 13 6 „	19 5	..	19 5	
182	McDuff, A. J.	„	8	1	0 13 6 „	20 1	..	20 1	
183	Murray, A. M.	„	8	1	0 13 6 „	22 11	..	22 11	
184	Walshe, W. P.	„	8	1	0 13 6 „	19 2	..	19 2	
185	Crawford, W. C. D.	„	8	1	0 13 6 „	19 3	..	19 3	
186	Barclay, J. T.	„	8	1	0 13 6 „	20 0	..	20 0	
187	Mather, F. D.	„	8	1	0 13 6 „	19 0	..	19 0	
188	Evans, W. C.	„	8	1	0 13 6 „	19 1	..	19 1	
189	Derbidge, C. E.	„	8	1	0 13 6 „	19 1	..	19 1	
190	Farr, W. E.	„	8	1	0 13 6 „	28 11	..	28 11	
191	Peachey, A. E.	„	8	1	0 13 6 „	18 0	..	18 0	
192	Torrance, A.	„	8	1	0 13 6 „	18 0	..	18 0	
193	Jamieson, R. G.	„	8	1	0 13 6 „	20 0	..	20 0	
194	McNab, J.	„	8	1	0 13 6 „	19 0	..	19 0	
195	Sturmer, F. J.	„	8	1	0 13 6 „	19 0	..	19 0	
196	Walker, R. A.	„	8	1	0 13 6 „	19 2	..	19 2	
197	Buckley, J.	„	8	1	0 13 6 „	19 1	..	19 1	
198	Donohue, W.	„	8	1	0 13 6 „	19 0	..	19 0	
199	Johnstone, J. M.	„	8	1	0 13 6 „	19 2	..	19 2	
200	Ternent, A.	„	8	1	0 13 6 „	18 4	..	18 4	
201	Barrowman, T.	„	8	1	0 13 6 „	17 10	..	17 10	
202	Dripps, J.	„	8	1	0 13 6 „	19 0	..	19 0	
203	Murray, J. M.	Night Foreman of Cleaners	8	1	0 13 6 „	20 0	..	20 0	
204	Bryce, G. J.	Engine-driver	8	1	0 13 6 „	19 3	..	19 3	
205	Jones, R. H.	„	8	1	0 13 6 „	16 7	0 6	17 1	
206	Scott, L.	„	8	1	0 13 6 „	20 7	0 7	21 2	
207	Sargeant, F. W. G. A.	„	8	1	0 13 6 „	14 10	1 4	16 2	
208	Hay, C.	„	8	1	0 13 0 „	19 0	0 3	19 0	
209	Sargent, F. J. A.	„	8	1	0 13 0 „	19 4	..	19 4	
210	Smith, W. S.	„	8	1	0 13 0 „	17 5	0 1	17 5	
211	Foster, A. G.	„	8	1	0 13 0 „	14 10	1 5	16 3	
212	Graham, J. H.	„	8	1	0 13 0 „	17 6	..	17 6	
213	Worner, E.	„	8	1	0 13 0 „	17 4	..	17 4	
214	Drennan, J. M.	„	8	1	0 13 0 „	18 3	..	18 3	
215	Hendren, J.	„	8	1	0 13 0 „	16 0	1 6	16 5	
216	Currie, J. H.	„	8	1	0 13 0 „	14 10	1 5	16 3	
217	McGonigal, W. J.	Night Foreman of Cleaners	8	1	0 13 0 „	17 5	..	17 5	
218	Whisker, A.	Engine-driver	8	1	0 13 0 „	18 2	..	18 2	
219	McAra, N.	„	8	1	0 13 0 „	18 4	..	18 4	
220	Fisher, G. A. V.	„	8	1	0 13 0 „	19 10	..	19 10	
221	Henderson, E. W.	„	8	1	0 13 0 „	17 7	..	17 7	
222	Clarke, J. J.	„	8	1	0 13 0 „	16 8	..	16 8	
223	McArley, W.	„	8	1	0 13 0 „	16 5	1 0	17 5	
224	Scott, M.	„	8	1	0 13 0 „	17 10	..	17 10	
225	Cheeseman, E. T.	„	8	1	0 13 0 „	17 3	..	17 3	
226	McGowan, F. J.	„	8	1	0 12 6 „	16 0	0 5	16 5	
227	Peters, H. C.	„	8	1	0 13 0 „	16 2	..	16 2	
228	Dews, G.	„	8	1	0 13 0 „	16 3	..	16 3	
229	Meachen, T.	„	8	1	0 12 6 „	19 3	..	19 3	
230	Hope, G.	„	8	1	0 13 0 „	15 8	..	15 8	
231	Mee, J. E.	„	8	1	0 13 0 „	16 0	0 8	16 5	
232	Ferguson, A.	„	8	1	0 13 0 „	17 0	0 6	17 6	
233	Keating, E. J.	„	8	1	0 13 0 „	16 5	0 7	17 0	
234	Halliburton, W. R.	„	8	1	0 13 0 „	14 10	1 2	16 0	
235	Urquhart, J. M.	„	8	1	0 13 0 „	16 5	0 3	16 5	
236	Hodges, W. J.	„	8	1	0 13 0 „	16 1	..	16 1	
237	Skellern, F.	„	8	1	0 13 0 „	17 6	..	17 6	
238	Handisides, T. W.	„	8	1	0 13 0 „	16 8	..	16 8	
239	Rutledge, J. W.	„	8	1	0 13 0 „	16 5	0 10	17 0	
240	Carter, T.	„	8	1	0 13 0 „	16 5	0 6	16 11	
241	Guthrie, G. H.	„	8	1	0 12 6 „	15 2	1 5	16 7	

RAILWAY DEPARTMENT CLASSIFICATION, 1913—*continued.*

SECOND DIVISION—*continued.*

Class 2: Locomotive—continued.

Prog. No.	Name.	Classification.				Service			Remarks.
		Designation.	Subclass.	Grade.	Rate of Pay	Since last appointed.	Prior to Date last appointed.	For Superannuation Purposes.	
					£ s. d.	Y. M.	Y. M.	Y. M.	
242	Twohill, J. G.	Engine driver	8	1	0 12 6 per diem	16 1	0 4	16 5	
243	Clark, P. D.	„	8	1	0 12 6 „	16 5	1 2	17 7	
244	Johnston, J.	„	8	1	0 12 6 „	15 9	..	15 9	
245	Bateman, A. V.	„	8	1	0 12 6 „	16 5	0 3	16 5	
246	Black, G. A.	„	8	1	0 12 6 „	14 5	2 1	16 6	
247	Paton, T.	„	8	1	0 12 6 „	15 6	..	15 6	
248	Stokes, J.	„	8	1	0 12 6 „	15 1	..	15 1	
249	Glanville, L.	„	8	1	0 12 6 „	16 10	..	16 10	
250	Murfitt, M. J.	„	8	1	0 12 6 „	16 2	0 6	16 5	
251	Harvey, T.	„	8	1	0 12 6 „	16 0	..	16 0	
252	Gamble, D.	„	8	1	0 12 6 „	15 1	..	15 1	
253	Clifford, J. G.	„	8	1	0 12 6 „	15 0	..	15 0	
254	Salter, P.	„	8	1	0 12 6 „	15 4	0 7	15 5	
255	Mark, D. B.	„	8	1	0 12 6 „	14 8	..	14 8	
256	Munro, D. A.	„	8	1	0 12 6 „	15 4	..	15 4	
257	Stone, J. H.	„	8	1	0 12 6 „	16 2	..	16 2	
258	Ashby, J.	„	8	1	0 12 6 „	19 10	..	19 10	
259	Meachen, J.	„	8	1	0 12 6 „	14 10	1 6	16 4	
260	Dow, J.	„	8	1	0 12 6 „	15 4	..	15 4	
261	Foster, G. L.	„	8	1	0 12 6 „	22 6	..	22 6	
262	McMurchie, D.	„	8	1	0 12 6 „	14 6	1 9	14 6	
263	Nelson, J. F.	„	8	1	0 12 6 „	14 0	5 1	..	
264	Turner, N. S.	„	8	1	0 12 6 „	18 4	..	18 4	
265	Pirie, F. K.	„	8	1	0 12 6 „	14 7	..	14 7	
266	Wills, H. M.	„	8	1	0 12 6 „	15 4	1 10	17 2	
267	Scott, D.	„	8	1	0 12 6 „	14 11	..	14 11	
268	Evitt, G. S.	„	8	1	0 12 6 „	15 4	..	15 4	
1	Horan, J.	Engine-driver	8	2	0 12 0 „	36 6	..	36 6	
2	Moore, J.	„	8	2	0 12 0 „	37 7	..	37 7	
3	Freeman, G.	„	8	2	0 12 0 „	38 1	..	38 1	
4	McDowell, W. J	„	8	2	0 12 0 „	22 10	..	22 10	
5	Phillips, R.	„	8	2	0 12 0 „	35 3	..	35 3	
6	Meekin, R.	„	8	2	0 12 0 „	34 7	..	34 7	
7	Lindsay, J.	„	8	2	0 12 0 „	32 4	..	32 4	
8	Hyland, W.	„	8	2	0 12 0 „	34 0	..	34 0	
9	Hodges, W.	„	8	2	0 12 0 „	35 2	..	35 2	
10	Kimber, F.	„	8	2	0 12 0 „	33 6	..	33 6	
11	Horan, O.	„	8	2	0 12 0 „	32 2	..	32 2	
12	Booth, J.	„	8	2	0 12 0 „	30 3	..	30 3	
13	Goodman, E.	Night Foreman of Cleaners	8	2	0 12 0 „	31 7	1 10	31 7	
14	Currie, J.	Engine-driver	8	2	0 12 0 „	30 10	..	30 10	
15	Sargent, G.	„	8	2	0 12 0 „	31 7	..	31 7	
16	Thompson, R. S.	„	8	2	0 12 0 „	30 8	..	30 8	
17	Donaldson, W.	„	8	2	0 12 0 „	35 8	..	35 8	
18	Pearse, W.	„	8	2	0 12 0 „	31 10	..	31 10	
19	Nelson, C. R. T.	„	8	2	0 12 0 „	29 2	..	29 2	
20	Leopold, A. R.	„	8	2	0 12 0 „	33 10	..	33 10	
21	Hood, D.		8	2	0 12 0 „	25 3	5 6	25 3	
22	Guthrie, T.	„	8	2	0 12 0 „	30 7	..	30 7	
23	Crawley, W. C.	„	8	2	0 12 0 „	31 2	..	31 2	
24	Munro, G.	„	8	2	0 12 0 „	24 3	4 5	24 3	
25	Jones, A. H.	„	8	2	0 12 0 „	22 2	7 11	30 1	
26	Kelly, W. H.	„	8	2	0 12 0 „	22 9	5 8	22 9	
27	Leslie, W. J.	Night Foreman of Cleaners	8	2	0 12 0 „	23 11	..	23 11	
28	Boyle, H.	Engine-driver	8	2	0 12 0 „	17 10	12 9	17 10	
29	Johnston, J. W.	„	8	2	0 12 0 „	17 10	..	17 10	
30	McNamara, J. J.	„	8	2	0 12 0 „	22 8	..	22 8	
31	Kennelly, Jno.	„	8	2	0 12 0 „	23 1	..	23 1	
32	Lindegreen, G. P.	„	8	2	0 12 0 „	22 9	..	22 9	
33	Blackmore, J.	„	8	2	0 12 0 „	22 8	..	22 8	
34	Reardon, J.	„	8	2	0 12 0 „	22 6	..	22 6	
35	Crone, E. R.	„	8	2	0 12 0 „	22 8	0 2	22 8	
36	Clapp, L. F.	„	8	2	0 12 0 „	22 9	..	22 9	
37	O'Shea, J.	„	8	2	0 12 0 „	22 6	..	22 6	
38	Shepherd, A.	„	8	2	0 12 0 „	22 5	..	22 5	
39	Smith, H.	„	8	2	0 12 0 „	21 11	..	21 11	
40	Bernard, C. E.	„	8	2	0 12 0 „	22 0	..	22 0	
41	Lee, G. H.	„	8	2	0 12 0 „	20 4	7 1	20 4	
42	Cunliffe, J. E.	„	8	2	0 12 0 „	19 2	..	19 2	
43	Hobbs, W.	„	8	2	0 12 0 „	23 11	..	23 11	
44	Walsh, M. J.	„	8	2	0 12 0 „	20 11	..	20 11	
45	Collins, A. E.	„	8	2	0 12 0 „	31 5	..	31 5	
46	Smith, G. T.	„	8	2	0 12 0 „	29 9	..	29 9	
47	Harvey, R. E.	„	8	2	0 12 0 „	16 5	0 6	16 11	

RAILWAY DEPARTMENT CLASSIFICATION, 1913—*continued.*

SECOND DIVISION—*continued.*

Class 2: Locomotive—continued.

Prog. No.	Name.	Classification				Service			Remarks
		Designation.	Subclass.	Grade.	Rate of Pay.	Since last appointed.	Prior to Date last appointed.	For Superannuation Purposes.	
					£ s. d.	Y. M.	Y. M.	Y. M.	
48	O'Connor, J. J.	Engine-driver	8	2	0 12 0 per diem	18 0	..	18 0	
49	McKenzie, T. W.	„	8	2	0 12 0 „	19 2	..	19 2	
50	Winter, F. E.	„	8	2	0 12 0 „	18 11	..	18 11	
51	Leishman, J. H. V.	„	8	2	0 12 0 „	18 4	..	18 4	
52	McKennie, J. H.	„	8	2	0 12 0 „	19 2	..	19 2	
53	Gaffey, J. C.	„	8	2	0 12 0 „	14 10	1 2	16 0	
54	Darney, J. B.	„	8	2	0 12 0 „	16 0	1 0	16 5	
55	Jones, L. W.	„	8	2	0 12 0 „	15 6	..	15 6	
56	Kerr, W. F.	„	8	2	0 12 0 „	15 3	..	15 3	
57	Munro, R. E.	„	8	2	0 12 0 „	15 0	..	15 0	
58	Bowden, J. H.	„	8	2	0 12 0 „	19 9	..	19 9	
59	Champion, W. P.	„	8	2	0 12 0 „	25 9	..	25 9	
60	Hogg, W. J.	„	8	2	0 12 0 „	15 4	..	15 4	
61	Paul, J. H.	„	8	2	0 12 0 „	15 6	..	15 6	
62	Leigh, J. P.	„	8	2	0 12 0 „	14 8	..	14 8	
63	Brown, H.	„	8	2	0 12 0 „	14 8	..	14 8	
64	Littlejohn, A.	„	8	2	0 12 0 „	15 6	..	15 6	
65	Cooper, T. M.	„	8	2	0 12 0 „	16 3	..	16 3	
66	Roughan, A.	„	8	2	0 12 0 „	15 0	..	15 0	
67	Riddock, A. J.	„	8	2	0 12 0 „	14 11	..	14 11	
68	Fisher, W. J.	„	8	2	0 12 0 „	15 0	1 5	16 5	
69	Henderson, H.	„	8	2	0 12 0 „	16 1	..	16 1	
70	Ewart, J.	„	8	2	0 12 0 „	14 6	..	14 6	
71	Bluck, F. C.	„	8	2	0 12 0 „	14 2	..	14 2	
72	Thompson, H. J.	„	8	2	0 12 0 „	15 1	..	15 1	
73	Bishop, H. C.	„	8	2	0 12 0 „	15 1	..	15 1	
74	Haddrell, G. A.	„	8	2	0 12 0 „	14 4	..	14 4	
75	Bennett, S. F.	„	8	2	0 12 0 „	14 11	..	14 11	
76	Blackwell, A. E.	„	8	2	0 12 0 „	14 9	..	14 9	
77	Brown, F. G.	„	8	2	0 12 0 „	14 9	..	14 9	
78	Snowdon, T. E.	„	8	2	0 12 0 „	15 0	..	15 0	
79	Pratt, T. W.	„	8	2	0 12 0 „	14 2	..	14 2	
80	Burd, H. J.	„	8	2	0 12 0 „	15 0	..	15 0	
81	Young, A.	„	8	2	0 12 0 „	14 3	..	14 3	
82	Hill, A.	„	8	2	0 12 0 „	14 5	..	14 5	
83	Bond, H. E.	„	8	2	0 12 0 „	17 8	..	17 8	
84	Cornish, J.	Night Foreman of Cleaners	8	2	0 12 0 „	14 3	..	14 3	
85	Stephenson, W. L.	Engine-driver	8	2	0 12 0 „	14 1	..	14 1	
86	Dutton, D. A.	„	8	2	0 12 0 „	14 4	..	14 4	
87	Purcell, A.	„	8	2	0 12 0 „	14 9	..	14 9	
88	Brown, W. N.	„	8	2	0 12 0 „	14 3	..	14 3	
89	Keen, C. E.	„	8	2	0 12 0 „	14 8	..	14 8	
90	Hoskin, J. E. B.	Night Foreman of Cleaners	8	2	0 12 0 „	14 9	..	14 9	
91	McCalman, T. M.	Ditto	8	2	0 12 0 „	33 5	..	33 5	
92	Ferguson, R.	Engine-driver	8	2	0 12 0 „	13 9	..	13 9	
93	Evans, H. S.	„	8	2	0 12 0 „	13 10	..	13 10	
94	Winder, W.	„	8	2	0 12 0 „	14 8	..	14 8	
95	Murray, F. J.	„	8	2	0 12 0 „	14 0	..	14 0	
96	Inglis, W.	„	8	2	0 12 0 „	14 4	..	14 4	
97	King, P. G.	„	8	2	0 12 0 „	14 4	..	14 4	
98	Woodham, H.	„	8	2	0 12 0 „	13 11	..	13 11	
99	Stewart, J. C.	„	8	2	0 12 0 „	13 6	0 2	13 6	
100	James, H. H. M.	Night Foreman of Cleaners	8	2	0 12 0 „	13 8	..	13 8	
101	Clark, W.	Engine-driver	8	2	0 12 0 „	13 5	..	13 5	
102	Ruddy, L. M.	„	8	2	0 12 0 „	13 5	0 2	13 5	
103	Whelan, F. J.	„	8	2	0 12 0 „	13 5	..	13 5	
104	Benney, J. R.	„	8	2	0 12 0 „	14 1	..	14 1	
105	Smith, S. V.	„	8	2	0 12 0 „	4 4	20 3	24 7	
106	Grossman, A. J. M.	„	8	2	0 12 0 „	4 4	20 7	24 11	
107	Coulter, G.	„	8	2	0 12 0 „	4 4	16 9	21 1	
108	Faire, M. W. J.	„	8	2	0 12 0 „	4 4	15 6	19 10	
109	Lavin, W. T.	„	8	2	0 12 0 „	4 4	11 11	16 3	
110	Wiles, W.	„	8	2	0 12 0 „	4 4	9 1	13 5	
111	Kindley, A. B.	„	8	2	0 12 0 „	14 4	..	14 4	
112	Robinson, G.	„	8	2	0 12 0 „	14 3	..	14 3	
113	Villars, E. G.	„	8	2	0 12 0 „	12 11	2 2	14 8	
114	Weale, J. P.	„	8	2	0 12 0 „	14 7	0 4	14 11	
115	Timms, W.	„	8	2	0 12 0 „	13 5	..	13 5	
116	Marshall, T. D.	„	8	2	0 12 0 „	14 2	..	14 2	
117	Shuffill, E.	„	8	2	0 12 0 „	13 4	..	13 4	
118	Mayes, F. G.	„	8	2	0 12 0 „	14 1	0 8	14 1	
119	Shaw, J. A.	„	8	2	0 12 0 „	14 4	0 8	15 0	
120	Hogan, M. J.	„	8	2	0 12 0 „	14 7	0 2	14 9	
121	Whyman, A. V.	„	8	2	0 12 0 „	14 2	0 9	14 11	

RAILWAY DEPARTMENT CLASSIFICATION, 1913—*continued.*

Prog. No.	Name	Classification.				Service			Remarks
		Designation.	Subclass.	Grade.	Rate of Pay	Since last appointed.	Prior to Date last appointed.	For Superannuation Purposes.	
		SECOND DIVISION—*continued.* *Class 2 : Locomotive*—continued.							
					£ s. d.	Y. M.	Y. M.	Y. M.	
122	Wright, D.	Engine-driver	8	2	0 12 0 per diem	13 2	2 6	15 8	
123	Morris, W. R.	″	8	2	0 12 0 ″	13 2	1 2	14 4	
124	Symes, C.	″	8	2	0 12 0 ″	13 2	..	13 2	
125	Wakefield, W.	″	8	2	0 12 0 ″	13 2	..	13 2	
126	McAdie, R. J.	″	8	2	0 12 0 ″	13 1	0 1	13 1	
127	Conley, J. J.	″	8	2	0 12 0 ″	13 1	..	13 1	
128	Archer, H. H. H.	″	8	2	0 12 0 ″	14 1	0 2	14 3	
129	Drew, F. G.	″	8	2	0 12 0 ″	14 3	0 1	14 4	
130	Donald, W. E.	″	8	2	0 12 0 ″	13 0	..	13 0	
131	Robb, W. G.	″	8	2	0 12 0 ″	13 0	..	13 0	
132	Staunton, J.	″	8	2	0 12 0 ″	13 0	..	13 0	
133	Lawson, J. E.	″	8	2	0 12 0 ″	13 0	1 11	14 11	
134	Leitch, J.	″	8	2	0 12 0 ″	12 11	..	12 11	
135	Luxton, T. D.	″	8	2	0 12 0 ″	12 11	..	12 11	
136	Jackson, P. C.	″	8	2	0 12 0 ″	12 11	..	12 11	
137	Cross, G. E.	″	8	2	0 12 0 ″	12 11	..	12 11	
138	Tubb, T. L.	″	8	2	0 12 0 ″	12 11	..	12 11	
139	McIntyre, J. H.	″	8	2	0 12 0 ″	12 10	0 1	12 11	
140	Bateman, E. G.	″	8	2	0 12 0 ″	14 8	..	14 8	
141	O'Hara, J.	″	8	2	0 12 0 ″	14 0	..	14 0	
142	Nicolson, W. M.	″	8	2	0 12 0 ″	14 0	..	14 0	
143	Haynes, E. G.	″	8	2	0 12 0 ″	14 2	1 5	15 7	
144	Thomson, J. D.	″	8	2	0 12 0 ″	13 2	..	13 2	
145	Watts, C. W.	″	8	2	0 12 0 ″	13 2	..	13 2	
146	Sleeman, E. J.	″	8	2	0 12 0 ″	13 2	..	13 2	
147	Keat, L. I.	″	8	2	0 12 0 ″	13 0	..	13 0	
148	Crothers, C. S.	″	8	2	0 12 0 ″	12 10	..	12 10	
149	Lewin, F. J.	″	8	2	0 12 0 ″	13 8	0 9	14 1	
150	Robertson, F. J.	″	8	2	0 12 0 ″	13 0	..	13 0	
151	French, G. H.	″	8	2	0 12 0 ″	13 5	..	13 5	
152	Child, E. A.	″	8	2	0 12 0 ″	12 9	0 1	12 10	
153	Gichard, W. G.	″	8	2	0 12 0 ″	13 4	1 4	14 8	
154	Strachan, W.	″	8	2	0 12 0 ″	13 4	..	13 4	
155	Biggs, T. E.	″	8	2	0 12 0 ″	12 9	..	12 9	
156	Mackley, F. M.	″	8	2	0 12 0 ″	12 9	..	12 9	
157	Hayward, J. H. P.	″	8	2	0 12 0 ″	12 11	..	12 11	
158	Rowe, A. A.	″	8	2	0 12 0 ″	13 0	..	13 0	
159	Crowley, W.	″	8	2	0 12 0 ″	13 6	1 3	14 8	
160	Deans, A. L.	″	8	2	0 12 0 ″	12 8	..	12 8	
161	Butterfield, A. F.	″	8	2	0 12 0 ″	12 8	0 2	12 10	
162	Flanagan, W.	″	8	2	0 12 0 ″	13 0	.	13 0	
163	Kelly, H. W.	″	8	2	0 12 0 ″	13 4	1 9	14 8	
164	Taylor, J. L.	″	8	2	0 12 0 ″	13 0	..	13 0	
165	Golder, F. J.	″	8	2	0 12 0 ″	13 0	..	13 0	
166	Rippin, A.	″	8	2	0 12 0 ″	12 6	..	12 6	
167	Cox, W. B.	″	8	2	0 12 0 ″	12 7	0 1	12 8	
168	Young, J. A.	″	8	2	0 12 0 ″	13 0	..	13 0	
169	Evans, J. R.	″	8	2	0 12 0 ″	14 3	..	14 3	
170	Snell, W. J.	″	8	2	0 12 0 ″	13 6	2 1	14 8	
171	Ford, P. W.	″	8	2	0 12 0 ″	12 8	..	12 8	
172	Anderson, M.	″	8	2	0 12 0 ″	13 5	..	13 5	
173	Moody, A. J.	″	8	2	0 12 0 ″	12 5	..	12 5	
174	Pearce, G. E. N.	″	8	2	0 12 0 ″	13 9	..	13 9	
175	Packer, J. P.	″	8	2	0 12 0 ″	12 6	..	12 6	
176	McDell, W. H.	Night Foreman of Cleaners	8	2	0 12 0 ″	14 6	..	14 6	
177	Bates, J. P.	Engine-driver	8	2	0 12 0 ″	13 2	..	13 2	
178	Parker, T.	″	8	2	0 12 0 ″	12 7	0 1	12 8	
179	Rigby, H. L.	″	8	2	0 12 0 ″	12 8	..	12 8	
180	Parker, H.	″	8	2	0 12 0 ″	12 3	..	12 3	
181	Roberts, F.	″	8	2	0 12 0 ″	12 3	..	12 3	
182	Bull, G.	″	8	2	0 12 0 ″	13 0	1 3	14 3	
183	Anderson, G. A. H.	″	8	2	0 12 0 ″	12 2	0 7	12 9	
184	Gall, W.	″	8	2	0 12 0 ″	12 4	..	12 4	
185	Page, F.	″	8	2	0 12 0 ″	12 2	..	12 2	
186	Delaney, J.	″	8	2	0 12 0 ″	12 7	1 7	14 2	
187	Lindsay, R.	″	8	2	0 12 0 ″	12 2	..	12 2	
188	Blackie, W. J.	″	8	2	0 12 0 ″	12 2	..	12 2	
189	Kear, H.	″	8	2	0 12 0 ″	12 6	..	12 6	
190	Smith, S. C. T. J.	″	8	2	0 12 0 ″	19 11	..	19 11	
191	O'Connell, T.	″	8	2	0 12 0 ″	12 8	..	12 8	
192	Pentecost, W. J.	″	8	2	0 12 0 ″	12 1	..	12 1	
193	Keating, J.	″	8	2	0 12 0 ″	12 1	..	12 1	
194	Crawley, J. A. M.	″	8	2	0 12 0 ″	15 9	..	15 9	
195	Burgess, A. C.	″	8	2	0 12 0 ″	13 4	..	13 4	
196	Bland, B. S.	″	8	2	0 12 0 ″	12 8	0 1	12 9	
197	Handcock, T.	″	8	2	0 12 0 ″	13 0	0 8	13 8	

RAILWAY DEPARTMENT CLASSIFICATION, 1913—*continued.*

SECOND DIVISION—*continued.*

Class 2: Locomotive—continued.

Prog. No.	Name.	Classification.				Service			Remarks
		Designation.	Subclass.	Grade.	Rate of Pay.	Since last appointed.	Prior to Date last appointed.	For Superannuation Purposes.	
					£ s. d.	Y. M.	Y. M.	Y. M.	
198	Campbell, J. H. T.	Engine-driver	8	2	0 12 0 per diem	12 11	..	12 11	
199	McCrossin, M.	"	8	2	0 12 0 "	13 1	..	13 1	
200	Munro, E.	"	8	2	0 12 0 "	12 5	..	12 5	
201	Stringer, N. M.	"	8	2	0 12 0 "	12 7	0 11	13 6	
202	White, P.	"	8	2	0 12 0 "	12 7	1 9	14 4	
203	Kofoed, R. J.	"	8	2	0 12 0 "	12 0	..	12 0	
204	Christie, W.	"	8	2	0 12 0 "	12 6	..	12 6	
205	Cushing, F.	"	8	2	0 12 0 "	11 11	..	11 11	
206	Ellis, F. A.	"	8	2	0 12 0 "	12 1	..	12 1	
207	Ross, H. K.	"	8	2	0 12 0 "	12 5	..	12 5	
208	Eteveneaux, J. W.	"	8	2	0 12 0 "	11 9	..	11 9	
209	Murphy, M.	"	8	2	0 12 0 "	11 8	..	11 8	
210	Robinson, H. S.	"	8	2	0 12 0 "	12 11	..	12 11	
211	Schmidt, C. A.	"	8	2	0 12 0 "	11 10	..	11 10	
212	Cox, F. E.	"	8	2	0 12 0 "	12 5	..	12 5	
213	Clough, W.	"	8	2	0 12 0 "	12 0	..	12 0	
214	Ferguson, A. G. A.	"	8	2	0 12 0 "	13 9	0 5	14 2	
215	Caskie, S.	"	8	2	0 12 0 "	11 7	..	11 7	
216	Piper, F. W.	"	8	2	0 12 0 "	11 11	..	11 11	
217	Weeks, H. J.	"	8	2	0 12 0 "	11 11	..	11 11	
218	Donovan, W. C.	"	8	2	0 12 0 "	11 9	..	11 9	
219	Sefton, F. E.	"	8	2	0 12 0 "	11 8	..	11 8	
220	Craies, J. E.	"	8	2	0 12 0 "	12 6	..	12 6	
221	Adams, A. B.	"	8	2	0 12 0 "	11 4	..	11 4	
222	Lyons, D. B.	"	8	2	0 12 0 "	12 0	..	12 0	
223	Robertson, F. R. C. B.	"	8	2	0 12 0 "	11 7	..	11 7	
224	Heiford, A. R.	"	8	2	0 12 0 "	12 3	..	12 3	
225	Kearns, N. L.	"	8	2	0 12 0 "	11 5	..	11 5	
226	Coatsworth, J. W.	"	8	2	0 12 0 "	12 7	0 1	12 8	
227	Harris, H. E.	"	8	2	0 12 0 "	12 2	..	12 2	
228	Killip, A. E.	"	8	2	0 12 0 "	12 1	..	12 1	
229	O'Reilly, M. P.	"	8	2	0 12 0 "	12 4	..	12 4	
230	Dobbie, R. C.	"	8	2	0 12 0 "	12 6	1 3	12 6	
231	Pittaway, R. R.	"	8	2	0 12 0 "	11 8	..	11 8	
232	Torrance, T.	"	8	2	0 12 0 "	12 4	..	12 4	
233	Gohl, C. H.	"	8	2	0 12 0 "	11 9	..	11 9	
234	Henderson, A. H.	"	8	2	0 12 0 "	11 9	..	11 9	
235	Bell, W. N.	"	8	2	0 12 0 "	12 5	..	12 5	
236	Burton, W. J.	"	8	2	0 12 0 "	11 6	..	11 6	
237	Edwards, T. A.	"	8	2	0 12 0 "	11 11	..	11 11	
238	Beatson, C. M.	"	8	2	0 12 0 "	12 0	..	12 0	
239	Edmonds, E. E.	"	8	2	0 12 0 "	12 4	0 11	13 3	
240	Malcon, F. J.	"	8	2	0 12 0 "	11 7	..	11 7	
241	Skilton, K. A.	"	8	2	0 12 0 "	11 7	..	11 7	
242	Allingham, J. J.	"	8	2	0 12 0 "	12 1	..	12 1	
243	Dick, T.	"	8	2	0 12 0 "	12 0	..	12 0	
244	Denz, A. C. J.	"	8	2	0 12 0 "	12 2	..	12 2	
245	Bartram, C. O.	Night Foreman of Cleaners	8	2	0 11 6 "	11 8	0 9	12 5	
246	Quinn, A. L.	Engine-driver	8	2	0 11 6 "	12 0	..	12 0	
247	McCabe, J. F.	"	8	2	0 12 0 "	13 3	..	13 3	
248	Dick, H.	"	8	2	0 12 0 "	11 5	0 5	11 10	
249	Orr, J. S.	"	8	2	0 12 0 "	12 5	0 2	12 7	
250	McKechnie, W. W.	"	8	2	0 11 6 "	12 6	..	12 6	
251	Gray, J. M.	"	8	2	0 11 6 "	12 0	..	12 0	
252	Stack, J. J.	"	8	2	0 12 0 "	11 9	3 3	15 0	
253	Mair, W. J. W.	"	8	2	0 12 0 "	12 11	..	12 11	To date from 2/4/1913.
254	Monds, R. W. A.	"	8	2	0 12 0 "	12 5	..	12 5	
255	Ellis, G.	"	8	2	0 11 6 "	11 8	..	11 8	
256	Taylor, S. T.	"	8	2	0 12 0 "	12 1	..	12 1	
257	Heape, G. K.	"	8	2	0 12 0 "	11 8	..	11 8	
258	O'Brien, W.	"	8	2	0 11 6 "	11 2	..	11 2	To date from 2/4/1913.
259	Murphy, E. J.	"	8	2	0 12 0 "	11 5	..	11 5	
260	Cox, E. G.	"	8	2	0 12 0 "	11 6	3 0	14 1	
261	Close, P. M.	"	8	2	0 11 6 "	11 7	..	11 7	
262	Shute, G. E.	"	8	2	0 12 0 "	11 1	..	11 1	
263	Holland, E. D.	"	8	2	0 11 6 "	11 1	2 2	13 3	
264	Andrews, E. H.	"	8	2	0 11 6 "	12 0	..	12 0	
265	Horan, S. F.	"	8	2	0 11 6 "	12 1	0 1	12 2	
266	Fyfe, J. F. H.	"	8	2	0 12 0 "	11 8	..	11 8	
267	Claney, S. P.	"	8	2	0 12 0 "	11 5	..	11 5	
268	Doyle, P.	"	8	2	0 11 6 "	11 9	..	11 9	
1	Hosie, J.	Fireman	8	1	0 10 6 "	30 10	3 1	30 10	
2	Smith, A. H.	"	8	1	0 10 6 "	20 11	..	20 11	
3	Jones, J.	"	8	1	0 10 6 "	12 8	..	12 8	
4	Nicholls, L. D.	"	8	1	0 10 6 "	11 11	..	11 11	

RAILWAY DEPARTMENT CLASSIFICATION, 1913—*continued.*

SECOND DIVISION—*continued.*

Class 2: Locomotive—continued.

Prog. No.	Name.	Classification.				Service			Remarks.
		Designation.	Subclass.	Grade.	Rate of Pay.	Since last appointed.	Prior to Date last appointed.	For Superannuation Purposes.	
					£ s. d.	Y. M.	Y. M.	Y. M.	
5	Hancock, E.	Fireman	8	1	0 10 6 per diem	11 8	..	11 8	
6	Boyd, R. J.	〃	8	1	0 10 6 〃	12 0	0 2	12 2	
7	Knowles, T. W. F.	〃	8	1	0 10 6 〃	11 11	..	11 11	
8	Clark, A.	〃	8	1	0 10 6 〃	11 10	..	11 10	
9	Lawrence, W.	〃	8	1	0 10 6 〃	11 7	..	11 7	
10	Bustard, T. W.	〃	8	1	0 10 6 〃	11 4	2 7	13 11	
11	O'Flaherty, J. P.	〃	8	1	0 10 6 〃	12 3	0 7	12 10	
12	Newton, H. E.	〃	8	1	0 10 6 〃	11 8	..	11 8	
13	Belsham, C. H.	〃	8	1	0 10 6 〃	11 9	..	11 9	
14	Rillstone, A.	〃	8	1	0 10 6 〃	11 8	..	11 8	
15	Newson, J. E. S.	〃	8	1	0 10 6 〃	11 5	..	11 5	
16	Lightfoot, S.	〃	8	1	0 10 6 〃	11 11	..	11 11	
17	Batt, J. C.	〃	8	1	0 10 6 〃	11 11	0 2	12 1	
18	Pepperell, J. E. G.	〃	8	1	0 10 6 〃	11 9	..	11 9	
19	Stehr, B. A. W.	〃	8	1	0 10 6 〃	11 4	..	11 4	
20	Milne, J.	〃	8	1	0 10 6 〃	11 5	..	11 5	
21	Farland, W. S.	〃	8	1	0 10 6 〃	11 1	..	11 1	
22	Harle, W. R.	〃	8	1	0 10 6 〃	11 3	..	11 3	
23	Scrimgeour, D.	〃	8	1	0 10 6 〃	12 7	..	12 7	
24	McConnell, T.	〃	8	1	0 10 6 〃	11 9	..	11 9	
25	Buckley, J. A. H. G.	〃	8	1	0 10 6 〃	11 8	..	11 8	
26	Hannan, J.	〃	8	1	0 10 6 〃	11 9	..	11 9	
27	Hynes, P. A.	〃	8	1	0 10 6 〃	11 1	..	11 1	
28	Vincent, J. F.	〃	8	1	0 10 6 〃	11 6	..	11 6	
29	Goodall, F.	〃	8	1	0 10 6 〃	11 2	..	11 2	
30	Borrows, R. A.	〃	8	1	0 10 6 〃	11 7	..	11 7	
31	Sander, C. O.	〃	8	1	0 10 6 〃	11 6	..	11 6	
32	Gunn, R. J. W.	〃	8	1	0 10 6 〃	11 0	..	11 0	
33	Pullar, W.	〃	8	1	0 10 6 〃	11 9	0 3	12 0	
34	Munro, H. A.	〃	8	1	0 10 6 〃	11 1	..	11 1	
35	Fraser, W. J.	〃	8	1	0 10 6 〃	11 1	..	11 1	
36	Pockson, W. J.	〃	8	1	0 10 6 〃	11 6	..	11 6	
37	Pullar, J.	〃	8	1	0 10 6 〃	11 5	..	11 5	
38	Dennehy, M.	〃	8	1	0 10 6 〃	11 3	..	11 3	
39	Stanton, A.	〃	8	1	0 10 6 〃	11 1	..	11 1	
40	Tacon, D. B.	〃	8	1	0 10 6 〃	11 11	..	11 11	
41	Gamby, S. E.	〃	8	1	0 10 6 〃	11 7	0 2	11 9	
42	Edlin, E. J.	〃	8	1	0 10 6 〃	11 10	..	11 10	
43	Munro, G. B.	〃	8	1	0 10 6 〃	11 6	..	11 6	
44	Meachen, J. H.	〃	8	1	0 10 6 〃	4 4	7 7	11 11	
45	Street, T. D.	〃	8	1	0 10 6 〃	4 4	6 11	11 3	
46	Langford, H. L.	〃	8	1	0 10 6 〃	4 4	6 0	10 4	
47	Meachen, A. E.	〃	8	1	0 10 6 〃	4 4	5 9	10 1	
48	Langford, N. H.	〃	8	1	0 10 6 〃	4 4	5 2	9 6	
49	Gibson, E. S.	〃	8	1	0 10 6 〃	13 4	1 2	14 6	
50	Neilson, A. L.	〃	8	1	0 10 6 〃	12 5	0 9	13 2	
51	Olive, S. T.	〃	8	1	0 10 6 〃	11 6	..	11 6	
52	Duff, W. H. W.	〃	8	1	0 10 6 〃	12 0	..	12 0	
53	West, H. C.	〃	8	1	0 10 6 〃	11 8	0 6	12 2	
54	O'Connell, M.	〃	8	1	0 10 6 〃	12 0	..	12 0	
55	Harris, N. E.	〃	8	1	0 10 6 〃	11 11	..	11 11	
56	McLean, W. J.	〃	8	1	0 10 6 〃	11 5	..	11 5	
57	Thomson, D.	〃	8	1	0 10 6 〃	11 1	..	11 1	
58	Carroll, R.	〃	8	1	0 10 6 〃	11 0	..	11 0	
59	Hastings, A.	〃	8	1	0 10 6 〃	11 4	..	11 4	
60	Green, C. F.	〃	8	1	0 10 6 〃	11 9	..	11 9	
61	Milne, E. J. R.	〃	8	1	0 10 6 〃	11 4	..	11 4	
62	Wood, L. W.	〃	8	1	0 10 6 〃	11 2	..	11 2	
63	Harris, T. R.	〃	8	1	0 10 6 〃	11 1	..	11 1	
64	Smith, W. J.	〃	8	1	0 10 6 〃	11 1	..	11 1	
65	Delahunty, W. J.	〃	8	1	0 10 6 〃	11 0	..	11 0	
66	Bartlett, A. H.	〃	8	1	0 10 6 〃	11 1	..	11 1	
67	Peck, G. S.	〃	8	1	0 10 6 〃	11 1	1 9	12 10	
68	Apperley, V. J.	〃	8	1	0 10 6 〃	11 2	0 1	11 3	
69	McCrossin, D.	〃	8	1	0 10 6 〃	11 2	..	11 2	
70	Owen, H. A.	〃	8	1	0 10 6 〃	11 1	1 8	12 9	
71	Daniel, H.	〃	8	1	0 10 6 〃	11 1	..	11 1	
72	Frye, J. A.	〃	8	1	0 10 6 〃	11 1	..	11 1	
73	Tapp, F. G.	〃	8	1	0 10 6 〃	11 0	..	11 0	
74	Weaver, F. B.	〃	8	1	0 10 6 〃	11 1	..	11 1	
75	Henley, J.	〃	8	1	0 10 6 〃	11 1	0 2	11 3	
76	Wallace, G. P.	〃	8	1	0 10 6 〃	11 0	1 6	12 6	
77	McPhail, C. E.	〃	8	1	0 10 6 〃	13 7	..	13 7	
78	Hutson, G. W.	〃	8	1	0 10 6 〃	11 0	..	11 0	
79	McCormack, L. F.	〃	8	1	0 10 6 〃	11 0	..	11 0	
80	Roberts, C. W. J.	〃	8	1	0 10 6 〃	11 0	..	11 0	
81	Calder, N. A.	〃	8	1	0 10 6 〃	10 11	..	10 11	

RAILWAY DEPARTMENT CLASSIFICATION, 1913—*continued.*

SECOND DIVISION—*continued.*

Class 2: Locomotive—continued.

Prog. No.	Name.	Classification.				Service			Remarks
		Designation.	Subclass.	Grade.	Rate of Pay.	Since last appointed.	Prior to Date last appointed.	For Superannuation Purposes.	
					£ s. d.	Y. M.	Y. M.	Y. M.	
82	Riordan, D. P.	Fireman	8	1	0 10 6 per diem	10 11	..	10 11	
83	O'Connell, T. M.	〃	8	1	0 10 6 〃	10 11	..	10 11	
84	Georgeson, J.	〃	8	1	0 10 6 〃	10 11	..	10 11	
85	Divers, W. A.	〃	8	1	0 10 6 〃	10 11	..	10 11	
86	Forde, D.	〃	8	1	0 10 6 〃	10 11	..	10 11	
87	Bird, N.	〃	8	1	0 10 6 〃	10 11	..	10 11	
88	Thomas, P. E.	〃	8	1	0 10 6 〃	10 11	..	10 11	
89	Collins, E.	〃	8	1	0 10 6 〃	10 11	..	10 11	
90	Joyce, J.	〃	8	1	0 10 6 〃	10 11	..	10 11	
91	Bruhn, F. H.	〃	8	1	0 10 6 〃	10 10	0 1	10 11	
92	Salisbury, W. J.	〃	8	1	0 10 6 〃	10 10	..	10 10	
93	Veitch, J. A.	〃	8	1	0 10 6 〃	10 10	..	10 10	
94	Upchurch, E. J.	〃	8	1	0 10 6 〃	10 10	..	10 10	
95	Voltz, D. G.	〃	8	1	0 10 6 〃	10 10	..	10 10	
96	Barron, T. D.	〃	8	1	0 10 6 〃	10 9	..	10 9	
97	Chadwick, H. L.	〃	8	1	0 10 6 〃	10 9	0 1	10 9	
98	Hunter, J. W.	〃	8	1	0 10 6 〃	10 9	..	10 9	
99	Elliott, C. B.	〃	8	1	0 10 6 〃	10 9	..	10 9	
100	McCaw, T. G.	〃	8	1	0 10 6 〃	10 9	..	10 9	
101	McLaren, J. R.	〃	8	1	0 10 6 〃	10 9	..	10 9	
102	Louden, J.	〃	8	1	0 10 6 〃	10 9	..	10 9	
103	Moore, E. E.	〃	8	1	0 10 6 〃	10 8	..	10 8	
104	Pickering, W. H.	〃	8	1	0 10 6 〃	10 8	..	10 8	
105	McGavin, G. A.	〃	8	1	0 10 6 〃	10 11	..	10 11	
106	Little, C.	〃	8	1	0 10 6 〃	10 8	..	10 8	
107	Veale, L. W.	〃	8	1	0 10 6 〃	10 8	..	10 8	
108	Melrose, D.	〃	8	1	0 10 6 〃	10 8	..	10 8	
109	Hislop, J. C.	〃	8	1	0 10 6 〃	10 8	..	10 8	
110	Kirk, R.	〃	8	1	0 10 6 〃	10 10	0 1	10 11	
111	Hill, J.	〃	8	1	0 10 6 〃	10 7	..	10 7	
112	Box, E.	〃	8	1	0 10 6 〃	10 7	..	10 7	
113	Inglis, R.	〃	8	1	0 10 6 〃	10 7	..	10 7	
114	Hughes, W. C.	〃	8	1	0 10 6 〃	10 7	..	10 7	
115	Barry, E. P.	〃	8	1	0 10 6 〃	10 7	0 8	11 1	
116	Pee, H.	〃	8	1	0 10 6 〃	10 6	2 6	13 0	
117	Bullock, H. A. I.	〃	8	1	0 10 6 〃	10 6	..	10 6	
118	Dew, B. E.	〃	8	1	0 10 6 〃	10 5	..	10 5	
119	Elmes, A. H.	〃	8	1	0 10 6 〃	10 5	0 3	10 8	
120	Rich, J. R.	〃	8	1	0 10 6 〃	10 5	..	10 5	
121	Smith, A. G.	〃	8	1	0 10 6 〃	10 5	..	10 5	
122	Boyer, G.	〃	8	1	0 10 6 〃	10 4	..	10 4	
123	Craven, J. H.	〃	8	1	0 10 6 〃	10 4	..	10 4	
124	McQuinn, L.	〃	8	1	0 10 6 〃	10 4	..	10 4	
125	Stokes, H. N.	〃	8	1	0 10 6 〃	10 4	..	10 4	
126	Butler, W. G.	〃	8	1	0 10 6 〃	12 9	..	12 9	
127	Forno, C. C.	〃	8	1	0 10 6 〃	10 3	..	10 3	
128	Elliot, J. M.	〃	8	1	0 10 6 〃	10 3	..	10 3	
129	Brosnahan, T.	〃	8	1	0 10 6 〃	10 3	..	10 3	
130	Kane, J.	〃	8	1	0 10 6 〃	10 3	..	10 3	
131	Harris, W. J.	〃	8	1	0 10 6 〃	10 3	..	10 3	
132	Sherlock, T.	〃	8	1	0 10 6 〃	10 3	0 7	10 10	
133	West, E. W.	〃	8	1	0 10 6 〃	10 2	..	10 2	
134	Newton, H.	〃	8	1	0 10 6 〃	10 2	0 5	10 7	
135	Lucas, C. O.	〃	8	1	0 10 6 〃	10 2	..	10 2	
136	Wallace, J.	〃	8	1	0 10 6 〃	10 1	..	10 1	
137	Durrant, R. P. C.	〃	8	1	0 10 6 〃	10 1	..	10 1	
138	Curtis, P. W.	〃	8	1	0 10 6 〃	10 0	..	10 0	
139	Redpath, L.	〃	8	1	0 10 6 〃	10 0	0 10	10 10	
140	Courtney, H. F.	〃	8	1	0 10 6 〃	10 0	0 1	10 1	
141	Mercer, R.	〃	8	1	0 10 6 〃	10 0	..	10 0	
142	McCutcheon, W. J.	〃	8	1	0 10 6 〃	10 0	..	10 0	
143	Drake, F. C.	〃	8	1	0 10 6 〃	10 0	..	10 0	
144	Tripp, R. H.	〃	8	1	0 10 6 〃	10 0	..	10 0	
145	Reeves, A. H.	〃	8	1	0 10 6 〃	10 0	0 3	10 3	
146	Cole, A. G.	〃	8	1	0 10 6 〃	9 11	..	9 11	
147	Savill, C. E.	〃	8	1	0 10 6 〃	9 11	..	9 11	
148	Somerville, J. M.	〃	8	1	0 10 6 〃	9 10	..	9 10	
149	McCarthy, J.	〃	8	1	0 10 6 〃	9 10	1 10	11 8	
150	Irwin, A. R.	〃	8	1	0 10 6 〃	9 10	..	9 10	
151	Scott, A.	〃	8	1	0 10 6 〃	9 11	0 4	10 3	
152	Brosnan, D. P.	〃	8	1	0 10 6 〃	9 10	..	9 10	
153	McVicar, A. C.	〃	8	1	0 10 6 〃	9 10	..	9 10	
154	Wackrow, W. A.	〃	8	1	0 10 6 〃	9 10	..	9 10	
155	Lyons, B. B.	〃	8	1	0 10 6 〃	9 10	..	9 10	
156	Hallberg, V. A.	〃	8	1	0 10 6 〃	9 9	..	9 9	
157	Trembath, T.	〃	8	1	0 10 6 〃	9 9	..	9 9	
158	Campbell, V. H.	〃	8	1	0 10 6 〃	9 9	0 5	10 2	

RAILWAY DEPARTMENT CLASSIFICATION, 1913—*continued.*

Prog. No.	Name.	Classification.				Service			Remarks.
		Designation.	Subclass.	Grade.	Rate of Pay.	Since last appointed.	Prior to Date last appointed.	For Superannuation Purposes.	
		SECOND DIVISION—*continued.*							
		Class 2: Locomotive—continued.							
					£ s. d.	Y. M.	Y. M.	Y. M.	
159	McKenzie, R. M.	Fireman	8	1	0 10 6 per diem	9 9	..	9 9	
160	McDonagh, R. W.	〃	8	1	0 10 6	9 9	..	9 9	
161	Ebbett, G. M.	〃	8	1	0 10 6 〃	9 9	..	9 9	
162	Johnston, W. B.	〃	8	1	0 10 6 〃	9 9	..	9 9	
163	Christopher, H. H.	〃	8	1	0 10 6 〃	9 8	..	9 8	
164	Welsh, T.	〃	8	1	0 10 6 〃	9 8	..	9 8	
165	Bidmead, J. S.	〃	8	1	0 10 6 〃	9 8	..	9 8	
166	Turkington, R. J.	〃	8	1	0 10 6 〃	9 7	..	9 7	
167	Keay, W.	〃	8	1	0 10 6 〃	9 7	0 3	9 10	
168	Marks, S.	〃	8	1	0 10 6 〃	9 7	..	9 7	
169	Kidd, S. C.	〃	8	1	0 10 6 〃	9 7	0 2	9 9	
170	Levis, J.	〃	8	1	0 10 6 〃	9 6	0 4	9 10	
171	Corich, J. J.	〃	8	1	0 10 6 〃	9 6	..	9 6	
172	Johnston, J. H.	〃	8	1	0 10 6 〃	9 5	..	9 5	
173	Bowman, T.	〃	8	1	0 10 6 〃	9 5	0 8	10 1	
174	Cooke, A. W.	〃	8	1	0 10 6 〃	9 4	..	9 4	
175	Manners, J. H.	〃	8	1	0 10 6 〃	9 4	0 1	9 5	
176	McKeown, L. B.	〃	8	1	0 10 6 〃	9 3	..	9 3	
177	Brown, C. J.	〃	8	1	0 10 6 〃	9 3	..	9 3	
178	Mason, S. J.	〃	8	1	0 10 6 〃	9 2	2 9	11 11	
179	Ellis, E.	〃	8	1	0 10 6 〃	9 2	..	9 2	
180	Neill, A. W.	〃	8	1	0 10 6 〃	9 2	0 9	9 11	
181	Harris, A. C.	〃	8	1	0 10 6 〃	9 1	..	9 1	
182	Robins, H.	〃	8	1	0 10 6 〃	9 1	..	9 1	
183	Nicol, A.	〃	8	1	0 10 0 〃	10 10	..	10 10	
184	McTigue, M.	〃	8	1	0 10 0 〃	10 3	..	10 3	
185	Hall, G. H.	〃	8	1	0 10 0 〃	9 10	..	9 10	
186	Jones, J. C.	〃	8	1	0 10 0 〃	9 2	..	9 2	
187	Conway, J.	〃	8	1	0 10 0 〃	9 2	..	9 2	
188	Macann, J.	〃	8	1	0 10 0 〃	9 1	0 6	9 7	
189	Percival, E. C.	〃	8	1	0 10 0 〃	9 1	..	9 1	
190	Betts, F. J.	〃	8	1	0 10 0 〃	9 1	..	9 1	
191	Young, W.	〃	8	1	0 10 0 〃	9 0	0 2	9 2	
192	Manibera, M.	〃	8	1	0 10 0 〃	9 0	..	9 0	
193	Olliver, R. P. E.	〃	8	1	0 10 0 〃	9 0	..	9 0	
194	Rollings, E. A.	〃	8	1	0 10 0 〃	9 0	..	9 0	
195	Corcoran, W. H.	〃	8	1	0 10 0 〃	8 11	0 2	9 1	
196	Bennett, A. T.	〃	8	1	0 10 0 〃	12 0	..	12 0	
197	Thorn, J.	〃	8	1	0 10 0 〃	8 11	..	8 11	
198	Johnston, J. A.	〃	8	1	0 10 0 〃	8 11	0 7	9 6	
199	McLeod, M. F.	〃	8	1	0 10 0 〃	8 11	..	8 11	
200	Mullen, J.	〃	8	1	0 10 0 〃	8 11	..	8 11	
201	McWhirter, W. M.	〃	8	1	0 10 0 〃	8 11	..	8 11	
202	Harkess, E. A. E.	〃	8	1	0 10 0 〃	8 11	..	8 11	
203	Leece, W. T.	〃	8	1	0 10 0 〃	8 11	..	8 11	
204	Hunter, W. A. A.	〃	8	1	0 10 0 〃	8 10	..	8 10	
205	Buchanan, G.	〃	8	1	0 10 0 〃	8 10	..	8 10	
206	McGrath, W.	〃	8	1	0 10 0 〃	11 4	..	11 4	
207	Bennie, H. D.	〃	8	1	0 10 0 〃	8 10	1 3	10 1	
208	Clinch, A. S.	〃	8	1	0 10 0 〃	8 10	0 1	8 11	
209	Enright, E. P.	〃	8	1	0 10 0 〃	8 10	..	8 10	
210	Gray, W. C.	〃	8	1	0 10 0 〃	8 10	..	8 10	
211	Bragg, H.	〃	8	1	0 10 0 〃	8 10	..	8 10	
212	Ullrich, F.	〃	8	1	0 10 0 〃	8 10	..	8 10	
213	Fraser, J.	〃	8	1	0 10 0 〃	8 9	..	8 9	
214	Livingstone, K.	〃	8	1	0 10 0 〃	8 9	..	8 9	
215	Falconer, H. J.	〃	8	1	0 10 0 〃	8 9	..	8 9	
216	Fitzsimons, P. F.	〃	8	1	0 10 0 〃	8 9	..	8 9	
217	Kelly, M.	〃	8	1	0 10 0 〃	8 8	..	8 8	
218	Patrick, J.	〃	8	1	0 10 0 〃	8 8	..	8 8	
219	Horgan, G. D.	〃	8	1	0 10 0 〃	8 8	..	8 8	
220	Tait, A. M.	〃	8	1	0 10 0 〃	8 8	..	8 8	
221	Reilly, W.	〃	8	1	0 10 0 〃	8 8	..	8 8	
222	Ory, J. W.	〃	8	1	0 10 0 〃	8 7	..	8 7	
223	Styles, H. A.	〃	8	1	0 10 0 〃	8 7	..	8 7	
224	McLean, L. D.	〃	8	1	0 10 0 〃	8 7	..	8 7	
225	Sandford, J. H.	〃	8	1	0 10 0 〃	8 6	..	8 6	
226	Sinclair, R.	〃	8	1	0 10 0 〃	8 6	..	8 6	
227	Poad, A. E. C.	〃	8	1	0 10 0 〃	8 6	2 7	11 1	
228	Marshall, S. W.	〃	8	1	0 10 0 〃	8 6	..	8 6	
229	Jardine, P.	〃	8	1	0 10 0 〃	8 6	..	8 6	
230	Skiffington, T.	〃	8	1	0 10 0 〃	8 5	..	8 5	
231	Agnew, H. W.	〃	8	1	0 10 0 〃	8 5	..	8 5	
232	Lindsay, F. S.	〃	8	1	0 10 0 〃	14 3	3 3	17 6	
233	Laing, R. F.	〃	8	1	0 10 0 〃	9 4	..	9 4	
234	Manning, A. H.	〃	8	1	0 10 0 〃	8 6	0 10	9 4	
235	Johnson, G. W.	〃	8	1	0 10 0 〃	8 5	..	8 5	

RAILWAY DEPARTMENT CLASSIFICATION, 1913—*continued.*

Prog. No.	Name.	Classification.				Service			Remarks.
		Designation.	Subclass.	Grade.	Rate of Pay.	Since last appointed.	Prior to Date last appointed.	For Superannuation Purposes.	
					£ s. d.	Y. M.	Y. M.	Y. M.	
	SECOND DIVISION—*continued.*								
	Class 2 : Locomotive—continued.								
236	Fitzgerald, W. J.	Fireman	8	1	0 10 0 per diem	8 5	..	8 5	
237	Toy, L. F.	„	8	1	0 10 0 „	8 5	..	8 5	
238	Pickering, E. A.	„	8	1	0 10 0 „	8 5	..	8 5	
239	Froude, J. A.	„	8	1	0 10 0 „	8 5	..	8 5	
240	Cormack, J.	„	8	1	0 10 0 „	8 5	..	8 5	
241	Hishon, D.	„	8	1	0 10 0 „	8 5	..	8 5	
242	McDonald, F.	„	8	1	0 10 0 „	8 5	2 4	10 9	
243	McCorkindale, A. P.	„	8	1	0 10 0 „	8 4	..	8 4	
244	Gladwin, W. F.	„	8	1	0 10 0 „	8 4	0 6	8 10	
245	O'Brien, M. J.	„	8	1	0 10 0 „	8 4	..	8 4	
246	Thomas, A. A.	„	8	1	0 10 0 „	11 3	..	11 3	
247	Dunn, H.	„	8	1	0 10 0 „	8 4	0 1	8 5	
248	Phelan, P. M.	„	8	1	0 10 0 „	8 4	..	8 4	
249	Dickson, J.	„	8	1	0 10 0 „	8 4	..	8 4	
250	Gillon, J.	„	8	1	0 10 0 „	8 4	..	8 4	
251	Day, G.	„	8	1	0 10 0 „	8 3	..	8 3	
252	Faire, C. L.	„	8	1	0 10 0 „	8 3	0 5	8 8	
253	Quinn, M. H.	„	8	1	0 10 0 „	8 3	1 5	9 8	
254	Terrace, R.	„	8	1	0 10 0 „	8 3	0 4	8 7	
255	Rowland, J.	„	8	1	0 10 0 „	8 2	..	8 2	
256	Meagher, J.	„	8	1	0 10 0 „	8 2	0 1	8 3	
257	Bradley, R. G. C. V.	„	8	1	0 10 0 „	8 2	0 3	8 5	
258	Denham, F. C.	„	8	1	0 10 0 „	8 2	..	8 2	
259	Pascoe, C. A.	„	8	1	0 10 0 „	8 1	..	8 1	
260	Burns, F. H.	„	8	1	0 10 0 „	8 1	0 2	8 3	
261	Wright, J. H.	„	8	1	0 10 0 „	8 1	..	8 1	
262	Rasmussen, C. L. M.	„	8	1	0 10 0 „	8 1	..	8 1	
263	Kerr, C. V.	„	8	1	0 10 0 „	8 1	..	8 1	
264	Hickey, J. E. P.	„	8	1	0 10 0 „	8 1	0 9	8 1	
265	Morgan, W. J.	„	8	1	0 10 0 „	8 0	..	8 0	
266	Faville, A. E.	„	8	1	0 10 0 „	8 0	1 0	9 0	
267	Ryan, C.	„	8	1	0 10 0 „	8 0	..	8 0	
268	Easton, H.	„	8	1	0 10 0 „	8 0	..	8 0	
269	Hennessy, J.	„	8	1	0 10 0 „	8 0	..	8 0	
270	Summerhays, A. F.	„	8	1	0 10 0 „	7 11	..	7 11	
271	Millard, W. O.	„	8	1	0 10 0 „	7 11	0 1	8 0	
272	Teasdale, J. W.	„	8	1	0 10 0 „	7 11	1 3	9 2	
273	Olsen, A. J.	„	8	1	0 10 0 „	7 11	..	7 11	
274	Philpott, A. C.	„	8	1	0 10 0 „	7 11	0 1	8 0	
275	Walker, J.	„	8	1	0 10 0 „	7 10	..	7 10	
276	Sim, J. H.	„	8	1	0 10 0 „	7 10	0 2	8 0	
277	Egan, J.	„	8	1	0 10 0 „	7 10	..	7 10	
278	McLoughlin, P. J.	„	8	1	0 10 0 „	7 10	0 9	8 7	
279	Leathwick, J.	„	8	1	0 10 0 „	7 10	..	7 10	
280	Ryan, J. M.	„	8	1	0 10 0 „	7 10	0 4	8 2	
281	Hume, C. J. W.	„	8	1	0 10 0 „	7 9	..	7 9	
282	Schmelz, H. A.	„	8	1	0 10 0 „	7 7	..	7 7	
283	McDonnell, C. J.	„	8	1	0 10 0 „	7 7	1 6	9 1	
284	Weir, R.	„	8	1	0 10 0 „	7 7	..	7 7	
285	Silvester, C. E. M.	„	8	1	0 10 0 „	7 7	..	7 7	
286	Kruskopf, S. E. W.	„	8	1	0 10 0 „	7 7	..	7 7	
287	Farrell, L.	„	8	1	0 10 0 „	7 6	..	7 6	
288	Gill, W. E. H.	„	8	1	0 10 0 „	7 5	..	7 5	
289	Neville, J.	„	8	1	0 10 0 „	7 5	..	7 5	
290	Casey, J. E.	„	8	1	0 10 0 „	7 5	..	7 5	
291	Greig, D.	„	8	1	0 10 0 „	4 4	5 11	10 3	
292	Lechner, H. T.	„	8	1	0 10 0 „	4 4	5 1	9 5	
293	Vine, W. L.	„	8	1	0 10 0 „	4 4	7 7	8 9	
294	Robb, J.	„	8	1	0 10 0 „	4 4	4 2	8 5	
295	Mack, A. W.	„	8	1	0 10 0 „	4 4	3 8	8 0	
296	Yardley, T. B.	„	8	1	0 10 0 „	4 4	3 8	8 0	
297	Reid, G.	„	8	1	0 10 0 „	4 4	3 7	7 11	
298	Lavin, F.	„	8	1	0 10 0 „	4 4	4 1	8 5	
299	Bailey, H.	„	8	1	0 10 0 „	4 4	3 3	7 7	
300	Rodgers, D.	„	8	1	0 10 0 „	7 3	..	7 3	
1	Nichols, J.	„	8	2	0 9 6 „	28 2	0 2	28 2	
2	Batt, A. J.	„	8	2	0 9 6 „	29 8	..	29 8	
3	O'Donnell, E. P.	„	8	2	0 9 6 „	9 1	1 0	10 1	
4	Kelliher, T.	„	8	2	0 9 6 „	9 1	..	9 1	
5	Wood, O. B. C.	„	8	2	0 9 6 „	9 0	..	9 0	
6	Bright, J. T.	„	8	2	0 9 6 „	8 1	..	8 1	
7	Brown, W. J. H.	„	8	2	0 9 6 „	7 7	..	7 7	
8	Hamilton, C. R.	„	8	2	0 9 6 „	7 3	0 7	7 10	
9	Ross, H. H.	„	8	2	0 9 6 „	7 3	..	7 3	
10	Mooney, G.	„	8	2	0 9 6 „	7 3	..	7 3	
11	Dalziel, W. M.	„	8	2	0 9 6 „	7 3	..	7 3	

RAILWAY DEPARTMENT CLASSIFICATION, 1913—*continued.*

Prog. No.	Name.	Classification.				Service			Remarks.
		Designation.	Subclass.	Grade.	Rate of Pay	Since last appointed.	Prior to Date last appointed.	For Superannuation Purposes.	
		SECOND DIVISION—*continued.* *Class 2: Locomotive*—continued.							
					£ s. d.	Y. M.	Y. M.	Y. M.	
12	Henderson, J. M.	Fireman	8	2	0 9 6 per diem	7 2	..	7 2	
13	Pardington, F. G.	„	8	2	0 9 6 „	7 2	..	7 2	
14	Donohue, T.	„	8	2	0 9 6 „	7 2	..	7 2	
15	Middlemass, V. C.	„	8	2	0 9 6 „	7 2	0 10	8 0	
16	Scott, F. W.	„	8	2	0 9 6 „	7 2	..	7 2	
17	Dundon, P.	„	8	2	0 9 6 „	7 1	..	7 1	
18	Milne, H. D.	„	8	2	0 9 6 „	7 1	0 7	7 8	
19	Higman, R.	„	8	2	0 9 6 „	7 1	..	7 1	
20	West, W. H.	„	8	2	0 9 6 „	7 1	..	7 1	
21	Beaumont, C. W.	„	8	2	0 9 6 „	7 1	..	7 1	
22	Newson, F. L.	„	8	2	0 9 6 „	7 1	..	7 1	
23	McIntosh, G. C.	„	8	2	0 9 6 „	7 1	..	7 1	
24	McFaul, J.	„	8	2	0 9 6 „	7 0	..	7 0	
25	Catterick, J. G.	„	8	2	0 9 6 „	7 0	..	7 0	
26	Hislop, C. F.	„	8	2	0 9 6 „	7 0	..	7 0	
27	Strachan, T. W.	„	8	2	0 9 6 „	7 0	..	7 0	
28	Hyland, C. W.	„	8	2	0 9 6 „	7 0	..	7 0	
29	Mann, W.	„	8	2	0 9 6 „	7 0	..	7 0	
30	Green, C.	„	8	2	0 9 6 „	7 0	..	7 0	
31	Whiting, G. R.	„	8	2	0 9 6 „	7 0	..	7 0	
32	Rossiter, E. A.	„	8	2	0 9 6 „	7 0	..	7 0	
33	Wheatley, G. A.	„	8	2	0 9 6 „	7 0	..	7 0	
34	McKillop, F.	„	8	2	0 9 6 „	7 0	..	7 0	
35	Williams, H. J. C.	„	8	2	0 9 6 „	7 0	..	7 0	
36	Burnip, E. S.	„	8	2	0 9 6 „	7 0	..	7 0	
37	Sweetman, M.	„	8	2	0 9 6 „	7 0	..	7 0	
38	Richards, T. J.	„	8	2	0 9 6 „	7 0	..	7 0	
39	Wil-her, G. A.	„	8	2	0 9 6 „	7 0	0 7	7 7	
40	Roxburgh, J.	„	8	2	0 9 6 „	7 0	..	7 0	
41	Malone, J.	„	8	2	0 9 6 „	7 0	..	7 0	
42	Fellows, P. C. S.	„	8	2	0 9 6 „	7 0	..	7 0	
43	Riordan, T. J.	„	8	2	0 9 6 „	7 0	..	7 0	
44	Deery, S. H.	„	8	2	0 9 6 „	7 0	..	7 0	
45	McKee, L. J. P.	„	8	2	0 9 6 „	7 0	..	7 0	
46	Davie, W. H.	„	8	2	0 9 6 „	7 0	..	7 0	
47	Hallaway, W. F.	„	8	2	0 9 6 „	7 0	..	7 0	
48	Bragg, J.	„	8	2	0 9 6 „	7 0	..	7 0	
49	Denholm, C. A.	„	8	2	0 9 6 „	7 0	..	7 0	
50	Fryer, F.	„	8	2	0 9 6 „	7 0	..	7 0	
51	Grant, N.	„	8	2	0 9 6 „	7 0	..	7 0	
52	Brennan, L. J.	„	8	2	0 9 6 „	7 0	..	7 0	
53	Bates, R. C. H.	„	8	2	0 9 6 „	7 0	..	7 0	
54	Starnes, J.	„	8	2	0 9 6 „	7 0	..	7 0	
55	Baxter, A.	„	8	2	0 9 6 „	7 0	..	7 0	
56	Stewart, A. J.	„	8	2	0 9 6 „	6 11	..	6 11	
57	Lindbom, F. L.	„	8	2	0 9 6 „	6 11	..	6 11	
58	Hopkins, W. J.	„	8	2	0 9 6 „	6 11	..	6 11	
59	McFarlane, D. D.	„	8	2	0 9 6 „	6 11	..	6 11	
60	Donovan, D. P. L.	„	8	2	0 9 6 „	6 11	..	6 11	
61	Martin, E.	„	8	2	0 9 6 „	6 11	..	6 11	
62	Martin, E. R.	„	8	2	0 9 6 „	6 11	..	6 11	
63	Miller, C. V.	„	8	2	0 9 6 „	6 11	..	6 11	
64	Stewart, W. D.	„	8	2	0 9 6 „	6 11	..	6 11	
65	Bradley, E. J.	„	8	2	0 9 6 „	6 11	..	6 11	
66	Hall, J. P.	„	8	2	0 9 6 „	6 11	..	6 11	
67	McNish, R. E.	„	8	2	0 9 6 „	6 11	0 2	7 1	
68	Ibbotson, P.	„	8	2	0 9 6 „	6 10	..	6 10	
69	Kirby, H. A.	„	8	2	0 9 6 „	6 10	..	6 10	
70	Flannagan, J.	„	8	2	0 9 6 „	6 10	..	6 10	
71	Wilkins, R.	„	8	2	0 9 6 „	6 10	..	6 10	
72	Booth, A. W.	„	8	2	0 9 6 „	6 10	..	6 10	
73	McCreery, E. J.	„	8	2	0 9 6 „	6 10	..	6 10	
74	Bishop, W. C. B.	„	8	2	0 9 6 „	6 10	..	6 10	
75	Minifie, E. R.	„	8	2	0 9 6 „	6 10	..	6 10	
76	Braidwood, C. D.	„	8	2	0 9 6 „	6 10	..	6 10	
77	Petersen, H. M.	„	8	2	0 9 6 „	6 10	..	6 10	
78	Valentine, W. J.	„	8	2	0 9 6 „	6 10	0 4	7 2	
79	McNeill, F. J.	„	8	2	0 9 6 „	6 10	..	6 10	
80	McLean, A. R.	„	8	2	0 9 6 „	6 10	..	6 10	
81	McDonald, A. E.	„	8	2	0 9 6 „	6 9	..	6 9	
82	Mundy, R. R.	„	8	2	0 9 6 „	6 9	1 4	8 1	
83	Max, A. T.	„	8	2	0 9 6 „	6 9	..	6 9	
84	Beattie, H. E.	„	8	2	0 9 6 „	6 9	..	6 9	
85	Fletcher, E.	„	8	2	0 9 6 „	6 9	..	6 9	
86	Stevens, G.	„	8	2	0 9 6 „	6 8	..	6 8	
87	McGrath, E. A.	„	8	2	0 9 6 „	6 8	..	6 8	
88	Henderson, G.	„	8	2	0 9 6 „	6 8	..	6 8	

RAILWAY DEPARTMENT CLASSIFICATION, 1913—*continued.*

SECOND DIVISION—*continued.*

Class 2: Locomotive—continued.

Prog. No.	Name.	Classification.				Service			Remarks.
		Designation.	Subclass.	Grade.	Rate of Pay	Since last appointed.	Prior to Date last appointed.	For Superannuation Purposes.	
					£ s. d.	Y. M.	Y. M.	Y. M.	
89	Kinnaird, R. N.	Fireman	8	2	0 9 6 per diem	6 8	..	6 8	
90	Finlay, R. E.	"	8	2	0 9 6 "	6 8	..	6 8	
91	Marks, E.	"	8	2	0 9 6 "	6 7	..	6 7	
92	Wilkinson, R. C.	"	8	2	0 9 6 "	6 7	..	6 7	
93	Bennett, W. J.	"	8	2	0 9 6 "	6 7	..	6 7	
94	Stewart, C. J.	"	8	2	0 9 6 "	6 7	..	6 7	
95	King, E. J.	"	8	2	0 9 6 "	6 7	..	6 7	
96	Barrett, E.	"	8	2	0 9 6 "	6 7	..	6 7	
97	Bennett, L. H.	"	8	2	0 9 6 "	6 7	1 10	8 5	
98	Black, T. S.	"	8	2	0 9 6 "	6 7	..	6 7	
99	Ingram, J. G.	"	8	2	0 9 6 "	6 7	..	6 7	
100	Paterson, D. G.	"	8	2	0 9 6 "	6 6	..	6 6	
101	Rattley, J.	"	8	2	0 9 6 "	6 6	..	6 6	
102	Finnie, A. J.	"	8	2	0 9 6 "	6 6	..	6 6	
103	Nixon, R. M.	"	8	2	0 9 6 "	6 6	..	6 6	
104	Salter, C. E. J.	"	8	2	0 9 6 "	6 6	0 5	6 11	
105	Granfell, A. E.	"	8	2	0 9 6 "	6 6	..	6 6	
106	Sanson, R.	"	8	2	0 9 6 "	6 6	..	6 6	
107	Martin, J. H.	"	8	2	0 9 6 "	6 6	..	6 6	
108	Kane, J. J.	"	8	2	0 9 6 "	6 6	..	6 6	
109	Fox, C.	"	8	2	0 9 6 "	6 6	..	6 6	
110	Patrick, T. K.	"	8	2	0 9 6 "	6 6	..	6 6	
111	Newton, W. B.	"	8	2	0 9 6 "	6 5	..	6 5	
112	Stapleton, J.	"	8	2	0 9 6 "	6 5	..	6 5	
113	Whittleston, H.	"	8	2	0 9 6 "	6 5	..	6 5	
114	Montgomery, G. T.	"	8	2	0 9 6 "	6 5	..	6 5	
115	Gregory, C. E.	"	8	2	0 9 6 "	6 5	..	6 5	
116	Young, J. M.	"	8	2	0 9 6 "	6 5	..	6 5	
117	Payne, A.	"	8	2	0 9 6 "	6 5	..	6 5	
118	Tonkin, S.	"	8	2	0 9 6 "	6 5	..	6 5	
119	Sullivan, J. B.	"	8	2	0 9 6 "	6 5	..	6 5	
120	Young, W. J.	"	8	2	0 9 6 "	6 7	..	6 7	
121	Falconer, L.	"	8	2	0 9 6 "	6 5	..	6 5	
122	McCubbin, J. C. C.	"	8	2	0 9 6 "	6 5	..	6 5	
123	Hurrell, P.	"	8	2	0 9 6 "	6 5	..	6 5	
124	Leslie, W.	"	8	2	0 9 6 "	6 4	..	6 4	
125	Pascoe, L. O.	"	8	2	0 9 6 "	6 4	..	6 4	
126	Broadbent, G. D. F.	"	8	2	0 9 6 "	6 4	1 1	7 5	
127	Mathie, R. B. S.	"	8	2	0 9 6 "	6 4	0 8	7 0	
128	O'Leary, D. A.	"	8	2	0 9 6 "	6 4	..	6 4	
129	Agnew, J.	"	8	2	0 9 6 "	6 4	..	6 4	
130	Luscombe, H. E.	"	8	2	0 9 6 "	6 4	0 9	7 1	
131	Bailey, D. D.	"	8	2	0 9 6 "	4 4	2 0	6 4	
132	Reid, J.	"	8	2	0 9 6 "	6 9	..	6 9	
133	Hitchens, H. M. Q.	"	8	2	0 9 6 "	6 3	..	6 3	
134	Barbour, H.	"	8	2	0 9 6 "	6 3	..	6 3	
135	Wills, J. A.	"	8	2	0 9 6 "	6 3	..	6 3	
136	Frazer, W. D.	"	8	2	0 9 6 "	6 3	..	6 3	
137	McCracken, J. H.	"	8	2	0 9 6 "	6 2	..	6 2	
138	Jamieson, J. T. A.	"	8	2	0 9 6 "	6 2	0 5	6 7	
139	Cudby, C. G.	"	8	2	0 9 6 "	6 2	..	6 2	
140	Harrison, J. F. R.	"	8	2	0 9 6 "	6 2	..	6 2	
141	Willicombe, C. W.	"	8	2	0 9 6 "	6 2	..	6 2	
142	Jenkin, G. H.	"	8	2	0 9 6 "	6 2	..	6 2	
143	Fulton, H. J.	"	8	2	0 9 6 "	6 2	..	6 2	
144	McClatchy, R. G.	"	8	2	0 9 6 "	6 1	0 7	6 8	
145	Leyland, E. C.	"	8	2	0 9 6 "	6 1	..	6 1	
146	Kirkwood, W. W.	"	8	2	0 9 6 "	6 1	..	6 1	
147	Ruane, A. T.	"	8	2	0 9 6 "	6 1	..	6 1	
148	Gyde, A. J.	"	8	2	0 9 6 "	6 0	..	6 0	
149	Moyle, W.	"	8	2	0 9 6 "	6 0	..	6 0	
150	Eustace, P. H.	"	8	2	0 9 6 "	6 0	..	6 0	
151	Raines, S. R.	"	8	2	0 9 6 "	6 0	1 6	7 6	
152	Loades, F.	"	8	2	0 9 6 "	6 0	..	6 0	
153	Blackburn, T. V.	"	8	2	0 9 6 "	6 0	1 6	7 6	
154	Buick, H. E.	"	8	2	0 9 6 "	6 0	..	6 0	
155	Hocking, L. J.	"	8	2	0 9 6 "	5 11	0 11	6 10	
156	Stone, C. E. F.	"	8	2	0 9 6 "	5 11	..	5 11	
157	Rafferty, H. G.	"	8	2	0 9 6 "	5 11	..	5 11	
158	Mardon, L. W. E.	"	8	2	0 9 6 "	4 4	1 7	5 11	
159	Loudon, H. S.	"	8	2	0 9 6 "	6 2	1 8	7 10	
160	Watson, J. C.	"	8	2	0 9 6 "	5 11	..	5 11	
161	Wilson, W. R.	"	8	2	0 9 6 "	5 11	..	5 11	
162	French, P. W.	"	8	2	0 9 6 "	5 11	..	5 11	
163	Hughes, B.	"	8	2	0 9 6 "	5 11	..	5 11	
164	Hutt, G. A.	"	8	2	0 9 6 "	5 11	..	5 11	
165	Toomey, C. W.	"	8	2	0 9 6 "	5 11	..	5 11	

RAILWAY DEPARTMENT CLASSIFICATION, 1913—*continued.*

SECOND DIVISION—*continued.*

Class 2: Locomotive—continued.

Prog. No.	Name.	Classification.				Service			Remarks.
		Designation.	Subclass.	Grade.	Rate of Pay	Since last appointed.	Prior to Date last appointed.	For Superannuation Purposes.	
					£ s. d.	Y. M.	Y. M.	Y. M.	
166	Rankin, J. M.	Fireman	8	2	0 9 6 per diem	5 11	..	5 11	
167	Corry, R. M.	„	8	2	0 9 6 „	5 11	..	5 11	
168	Brown, W. A.	„	8	2	0 9 6 „	5 11	..	5 11	
169	Strong, H. O.	„	8	2	0 9 6 „	5 10	..	5 10	
170	Latimer, H. F.	„	8	2	0 9 6 „	5 10	..	5 10	
171	Molloney, J. A.	„	8	2	0 9 6 „	5 10	..	5 10	
172	Moore, C. J.	„	8	2	0 9 6 „	5 10	..	5 10	
173	Robinson, T. A.	„	8	2	0 9 6 „	5 10	..	5 10	
174	Herbert, S.	„	8	2	0 9 6 „	5 9	..	5 9	
175	Holt, T.	„	8	2	0 9 6 „	5 9	..	5 9	
176	Anderson, C. W.	„	8	2	0 9 6 „	7 3	..	7 3	
177	Syder, G. R.	„	8	2	0 9 6 „	5 9	1 2	6 11	
178	Fincham, L. G.	„	8	2	0 9 6 „	5 9	..	5 9	
179	Lucas, E.	„	8	2	0 9 6 „	5 9	..	5 9	
180	Prain, G. M.	„	8	2	0 9 6 „	5 9	..	5 9	
181	Teesdale, T.	„	8	2	0 9 6 „	5 9	..	5 9	
182	Laine, W.	„	8	2	0 9 6 „	5 9	..	5 9	
183	Terras, R. M.	„	8	2	0 9 6 „	5 9	..	5 9	
184	Pengelly, W.	„	8	2	0 9 6 „	5 9	..	5 9	
185	Elliott, J. E.	„	8	2	0 9 6 „	5 8	0 1	5 9	
186	Lobb, A.	„	8	2	0 9 6 „	5 8	2 4	8 0	
187	White, G. H.	„	8	2	0 9 6 „	5 8	..	5 8	
188	Milligan, C. H. A.	„	8	2	0 9 6 „	5 8	..	5 8	
189	Rice, J. J.	„	8	2	0 9 6 „	5 7	..	5 7	
190	Atkins, F. W.	„	8	2	0 9 6 „	5 10	0 4	6 2	
191	Edwards, A. G.	„	8	2	0 9 6 „	5 7	..	5 7	
192	Souness, D. T.	„	8	2	0 9 6 „	5 7	..	5 7	
193	Wilson, W.	„	8	2	0 9 6 „	5 7	..	5 7	
194	Stratton, H. T.	„	8	2	0 9 6 „	5 7	..	5 7	
195	Adams, G. E.	„	8	2	0 9 6 „	5 7	..	5 7	
196	Thomson, R. J.	„	8	2	0 9 6 „	5 7	0 3	5 10	
197	Fredericks, A. F.	„	8	2	0 9 6 „	5 6	0 4	5 10	
198	Muirhead, J.	„	8	2	0 9 6 „	8 1	..	8 1	
199	Pennell, J. J.	„	8	2	0 9 6 „	5 6	..	5 6	
200	Smith, W.	„	8	2	0 9 6 „	5 6	..	5 6	
201	Anstis, F. R. S.	„	8	2	0 9 6 „	5 6	1 4	6 10	
202	Ebbett, L. G.	„	8	2	0 9 6 „	5 6	..	5 6	
203	Cresswell, N. A.	„	8	2	0 9 6 „	5 6	..	5 6	
204	Borough, J. J.	„	8	2	0 9 6 „	5 6	..	5 6	
205	Mannix, P.	„	8	2	0 9 6 „	5 5	..	5 5	
206	McMurchie, T.	„	8	2	0 9 6 „	5 5	..	5 5	
207	Hyslop, R.	„	8	2	0 9 6 „	5 5	..	5 5	
208	Doran, W. J.	„	8	2	0 9 6 „	4 4	1 1	5 5	
209	Irvine, J. F.	„	8	2	0 9 6 „	5 4	..	5 4	
210	Carruthers, R. V.	„	8	2	0 9 6 „	5 4	..	5 4	
211	Cox, R. J.	„	8	2	0 9 6 „	5 4	..	5 4	
212	Hunt, A. E.	„	8	2	0 9 6 „	5 4	2 8	8 0	
213	McWilliam, F. D.	„	8	2	0 9 6 „	5 3	..	5 3	
214	Wilson, A. B. D.	„	8	2	0 9 6 „	5 3	..	5 3	
215	Farrell, J. D.	„	8	2	0 9 6 „	4 4	0 11	5 3	
216	Ford, S. R.	„	8	2	0 9 6 „	5 3	..	5 3	
217	Dell, P.	„	8	2	0 9 6 „	5 3	..	5 3	
218	Ward, B.	„	8	2	0 9 6 „	5 3	..	5 3	
219	Brown, W. W.	„	8	2	0 9 6 „	5 3	..	5 3	
220	Gordon, D. J.	„	8	2	0 9 6 „	5 3	..	5 3	
221	Bradley, W. C.	„	8	2	0 9 6 „	5 3	..	5 3	
222	Bateman, A. O.	„	8	2	0 9 6 „	5 3	..	5 3	
223	Packer, W. T.	„	8	2	0 9 6 „	5 2	..	5 2	
224	Guthrie, T.	„	8	2	0 9 6 „	5 2	..	5 2	
225	Wilsher, A. E.	„	8	2	0 9 6 „	5 2	..	5 2	
226	Johnston, G. T.	„	8	2	0 9 6 „	4 4	0 10	5 2	
227	Clark, H. J.	„	8	2	0 9 6 „	5 2	..	5 2	
228	Robins, G.	„	8	2	0 9 6 „	5 2	..	5 2	
229	Skerten, A. J.	„	8	2	0 9 6 „	5 2	..	5 2	
230	Ward, H. te R.	„	8	2	0 9 6 „	5 2	0 7	5 9	
231	Gunn, T.	„	8	2	0 9 6 „	5 2	1 2	6 4	
232	Taylor, H. W.	„	8	2	0 9 6 „	5 2	..	5 2	
233	Scott, G. E.	„	8	2	0 9 6 „	5 2	..	5 2	
234	Walker, W. H.	„	8	2	0 9 6 „	5 2	..	5 2	
235	Graham, W.	„	8	2	0 9 6 „	5 1	..	5 1	
236	Penberthy, A. J. B	„	8	2	0 9 6 „	5 1	..	5 1	
237	Reed, J. C.	„	8	2	0 9 6 „	5 1	..	5 1	
238	Costello, D.	„	8	2	0 9 6 „	5 1	..	5 1	
239	Hobbs, A. J. W.	„	8	2	0 9 6 „	5 1	..	5 1	
240	Allott, F. E.	„	8	2	0 9 6 „	5 1	..	5 1	
241	Hayward, J. F. H.	„	8	2	0 9 6 „	5 1	..	5 1	
242	Smith, Cyril L.	„	8	2	0 9 6 „	5 1	..	5 1	

RAILWAY DEPARTMENT CLASSIFICATION, 1913—*continued.*

SECOND DIVISION—*continued.*

Class 2: Locomotive—continued.

Prog. No.	Name.	Classification.				Service			Remarks
		Designation.	Subclass.	Grade.	Rate of Pay	Since last appointed.	Prior to Date last appointed.	For Superannuation Purposes.	
					£ s. d.	Y. M.	Y. M.	Y. M.	
243	Moroney, E. J. ..	Fireman	8	2	0 9 6 per diem	5 0	..	5 0	
244	Anderson, J. A. ..	,, ...	8	2	0 9 6 ,,	5 0	..	5 0	
245	Simonson, E. A. ..	,, ...	8	2	0 9 6 ,,	5 0	..	5 0	
246	Champion, W. D. ..	,, ...	8	2	0 9 6 ,,	5 0	2 7	7 7	
247	Mulholland, G. ..	,, ...	8	2	0 9 6 ,,	5 0	..	5 0	
248	Hislop, A.	,, ...	8	2	0 9 6 ,,	5 0	..	5 0	
249	Fox, T.	,, ...	8	2	0 9 6 ,,	5 0	..	5 0	
250	Hoddinott, W. H. ..	,, ...	8	2	0 9 6 ,,	5 0	..	5 0	
251	McNeill, R. D. C. ..	,, ...	8	2	0 9 6 ,,	5 0	..	5 0	
252	Martelli, H. D. ..	,, ...	8	2	0 9 6 ,,	4 4	1 1	5 5	
253	Diepenheim, C. L. ..	,, ...	8	2	0 9 6 ,,	5 0	..	5 0	
254	Irwin, W. H.	,, ...	8	2	0 9 6 ,,	5 0	..	5 0	
255	Butler, A.	,, ...	8	2	0 9 6 ,,	5 0	1 0	6 0	
256	Adams, E. R... ..	,, ...	8	2	0 9 6 ,,	5 0	..	5 0	
257	Kilgour, A.	,, ...	8	2	0 9 6 ,,	5 0	..	5 0	
258	Jago, E. S.	,, ...	8	2	0 9 6 ,,	4 11	2 2	7 1	
259	Watling, A. J. ..	,, ...	8	2	0 9 6 ,,	4 11	..	4 11	
260	Downs, F. W... ..	,, ...	8	2	0 9 6 ,,	4 11	0 8	5 7	
261	McRae, J. W. A. ..	,, ...	8	2	0 9 6 ,,	4 11	..	4 11	
262	Abrahams, H. L. ..	,, ...	8	2	0 9 6 ,,	4 11	..	4 11	
263	Clark, R.	,, ...	8	2	0 9 6 ,,	4 11	..	4 11	
264	Perrin, E. F.	,, ...	8	2	0 9 6 ,,	4 11	..	4 11	
265	Semple, W. S. ..	,, ...	8	2	0 9 6 ,,	4 11	..	4 11	
266	Patterson, W. S. ..	,, ...	8	2	0 9 6 ,,	4 11	..	4 11	
267	Durry, E.	,, ...	8	2	0 9 6 ,,	4 11	0 6	5 5	
268	Diggins, D. P. ..	,, ...	8	2	0 9 6 ,,	4 11	..	4 11	
269	Carey, G. H.	,, ...	8	2	0 9 6 ,,	4 10	..	4 10	
270	Daly, P. C.	,, ...	8	2	0 9 6 ,,	4 10	..	4 10	
271	Orlowski, M. F. ..	,, ...	8	2	0 9 6 ,,	4 10	..	4 10	
272	Johnston, M.	,, ...	8	2	0 9 6 ,,	4 10	..	4 10	
273	Bray, A. P.	,, ...	8	2	0 9 6 ,,	4 10	..	4 10	
274	Gunn, J.	,, ...	8	2	0 9 6 ,,	4 10	..	4 10	
275	Judd, J.	,, ...	8	2	0 9 6 ,,	4 10	..	4 10	
276	Tangaroa, J. T. ..	,, ...	8	2	0 9 6 ,,	4 10	..	4 10	
277	Little, C. G.	,, ...	8	2	0 9 6 ,,	4 10	0 5	5 3	
278	Waddell, E. H. ..	,, ...	8	2	0 9 6 ,,	4 10	..	4 10	
279	Doogin, W. L. ..	,, ...	8	2	0 9 6 ,,	4 9	..	4 9	
280	Pilling, G. H... ..	,, ...	8	2	0 9 6 ,,	4 9	..	4 9	
281	Joseph, J. D. B. ..	,, ...	8	2	0 9 6 ,,	4 9	0 1	4 10	
282	Osborne, F. W. ..	,, ...	8	2	0 9 6 ,,	4 9	1 1	5 10	
283	Bennett, J. W. ..	,, ...	8	2	0 9 6 ,,	4 9	..	4 9	
284	Ede, J.	,, ...	8	2	0 9 6	5 7	..	5 7	
285	England, W. F. ..	,, ...	8	2	0 9 6 ,,	4 9	..	4 9	
286	Williams, A. P. ..	,, ...	8	2	0 9 6 ,,	4 9	..	4 9	
287	Johnson, C.	,, ...	8	2	0 9 6 ,,	4 9	..	4 9	
288	Hanley, J.	,, ...	8	2	0 9 6 ,,	4 9	..	4 9	
289	Cloke, F. G.	,, ...	8	2	0 9 6 ,,	4 9	..	4 9	
290	Penberthy, B. J. ..	,, ...	8	2	0 9 6 ,,	4 9	..	4 9	
291	Yates, A. S.	,, ...	8	2	0 9 6 ,,	4 9	..	4 9	
292	Greenhill, V. L. ..	,, ...	8	2	0 9 6 ,,	4 9	..	4 9	
293	Millin, W. G... ..	,, ...	8	2	0 9 6 ,,	4 9	0 1	4 10	
294	Motion, W. A. ..	,, ...	8	2	0 9 6 ,,	4 8	1 3	5 11	
295	Benfell, T. C... ..	,, ...	8	2	0 9 6 ,,	4 8	..	4 8	
296	Huckstep, B. C. ..	,, ...	8	2	0 9 6 ,,	4 8	..	4 8	
297	Smith, E. A.	,, ...	8	2	0 9 6 ,,	4 8	..	4 8	
298	Corcoran, J. P. A. ..	,, ...	8	2	0 9 6 ,,	4 8	..	4 8	
299	Matheson, J. T. ..	,, ...	8	2	0 9 6 ,,	4 8	..	4 8	
1	Miles, H. L. ..	Cleaner	8	..	0 9 0 ,,	7 0	..	7 0	
2	Irving, R.	,, ...	8	..	0 9 0 ,,	6 11	0 4	7 3	
3	McLachlan, J. D. W. ..	,, ...	8	..	0 9 0 ,,	4 8	..	4 8	
4	Lousley, E.	,, ...	8	..	0 9 0 ,,	4 8	..	4 8	
5	Moorhouse, W. C. S. ..	,, ...	8	..	0 9 0 ,,	4 8	..	4 8	
6	Wright, C. E... ..	,, ...	8	..	0 9 0 ,,	4 8	..	4 8	
7	Prosper, J.	,, ...	8	..	0 9 0 ,,	4 8	..	4 8	
8	Bradley, F. S. ..	,, ...	8	..	0 9 0 ,,	4 8	..	4 8	
9	Mayes, C. A.	,, ...	8	..	0 9 0 ,,	4 8	1 5	6 1	
10	Crockett, R. L. ..	,, ...	8	..	0 9 0 ,,	4 8	0 4	5 0	
11	Gilbert, L. C... ..	,, ...	8	..	0 9 0 ,,	4 8	0 1	4 9	
12	Buckley, C. C. J. ..	,, ...	8	..	0 9 0 ,,	4 8	..	4 8	
13	Davis, F. C. M. ..	,, ...	8	..	0 9 0	4 8	0 6	5 2	
14	Squire, A. J.	,, ...	8	..	0 9 0 ,,	4 8	..	4 8	
15	Wilson, J.	,, ...	8	..	0 9 0 ,,	4 7	1 2	5 9	
16	Harris, A. F. R. ..	,, ...	8	..	0 9 0 ,,	4 7	..	4 7	
17	Lee, E.	,, ...	8	..	0 9 0 ,,	4 7	..	4 7	
18	Seyb, J.	,, ...	8	..	0 9 0 ,,	4 7	1 4	5 11	
19	Arnold, F. W. ..	,, ...	8	..	0 9 0 ,,	4 7	..	4 7	

RAILWAY DEPARTMENT CLASSIFICATION, 1913—*continued.*

Prog. No.	Name.	Classification.				Service			Remarks
		Designation.	Subclass.	Grade.	Rate of Pay	Since last appointed.	Prior to Date last appointed.	For Superannuation Purposes.	
	SECOND DIVISION—*continued.* *Class 2: Locomotive*—continued.								
					£ s. d.	Y. M.	Y. M.	Y. M.	
20	Kennard, B. G. ..	Cleaner	8	..	0 9 0 per diem	4 7	..	4 7	
21	Ardern, S. V. H. ..	„	8	..	0 9 0 „	4 7	..	4 7	
22	Crowe, E. O.	„	8	..	0 9 0 „	4 7	..	4 7	
23	Hill, J. E.	„	8	..	0 9 0 „	4 7	..	4 7	
24	Vial, J. M.	„	8	..	0 9 0 „	4 6	0 1	4 7	
25	Turkington, W. ..	„	8	..	0 9 0 „	4 4	0 2	4 6	
26	McMinn, W. E. ..	„	8	..	0 9 0 „	4 5	1 9	6 2	
27	Bergin, J. J.	„	8	..	0 9 0 „	4 5	..	4 5	
28	Robertson, A... ..	„	8	..	0 9 0 „	4 8	..	4 8	
29	McIntosh, C. G. H. S. ..	„	8	..	0 9 0 „	4 5	..	4 5	
30	Moss, H. O.	„	8	..	0 9 0 „	4 5	..	4 5	
31	Olson, J. A.	„	8	..	0 9 0 „	4 5	..	4 5	
32	Gray, A. J. C... ..	„	8	..	0 9 0 „	4 9	..	4 9	
33	Barton, W.	„	8	..	0 9 0 „	4 4	..	4 4	
34	Houghton, R... ..	„	8	..	0 9 0 „	4 4	1 2	5 6	
35	Smith, Clarence L. ..	„	8	..	0 9 0 „	4 4	0 11	5 3	
36	Brooks, G. V. R. ..	„	8	..	0 9 0 „	4 4	..	4 4	
37	Ewart, T.	„	8	..	0 9 0 „	4 4	0 6	4 10	
38	Ritchie, A. P... ..	„	8	..	0 9 0 „	4 4	..	4 4	
39	Cameron, R. L. ..	„	8	..	0 9 0 „	4 4	..	4 4	
40	Lupton, R. A... ..	„	8	..	0 9 0 „	4 3	..	4 3	
41	Barnes, H.	„	8	..	0 9 0 „	4 3	..	4 3	
42	Petersen, P. A. ..	„	8	..	0 9 0 „	4 3	..	4 3	
43	Martis, B. L.	„	8	..	0 9 0 „	4 3	..	4 3	
44	Matthews, J.	„	8	..	0 9 0 „	4 3	..	4 3	
45	Newman, F. A. ..	„	8	..	0 9 0 „	4 3	..	4 3	
46	Sigglekow, L. H. ..	„	8	..	0 9 0 „	4 3	..	4 3	
47	Patterson, A. G. ..	„	8	..	0 9 0 „	4 2	..	4 2	
48	Constable, C. L. ..	„	8	..	0 9 0 „	4 2	..	4 2	
49	Penno, J. W.	„	8	..	0 9 0 „	4 2	..	4 2	
50	Wurm, W. G. L. ..	„	8	..	0 9 0 „	4 2	..	4 2	
51	Hayden, S. H. ..	„	8	..	0 9 0 „	4 2	..	4 2	
52	Heath, C. M.	„	8	..	0 9 0 „	4 2	..	4 2	
53	Wakelin, W. H. ..	„	8	..	0 9 0 „	4 1	..	4 1	
54	Brown, N. E.	„	8	..	0 9 0 „	4 1	..	4 1	
55	Easton, W. L. ..	„	8	..	0 9 0 „	4 1	..	4 1	
56	Poole, H. D.	„	8	..	0 9 0 „	4 1	0 10	4 11	
57	Pearson, K. S. ..	„	8	..	0 8 0 „	4 0	..	4 0	
58	Donaldson, S. G. ..	„	8	..	0 8 0 „	4 0	..	4 0	
59	Kerr, R.	„	8	..	0 8 0 „	3 11	..	3 11	
60	King, G. H. F. ..	„	8	..	0 8 0 „	3 11	..	3 11	
61	McArthur, J. N. ..	„	8	..	0 8 0 „	3 11	..	3 11	
62	Slaughter, H. V. M. ..	„	8	..	0 8 0 „	3 11	..	3 11	
63	Good, R.	„	8	..	0 8 0 „	3 11	..	3 11	
64	Scott, J. W.	„	8	..	0 8 0 „	3 11	..	3 11	
65	Ryan, L. P.	„	8	..	0 8 0 „	3 11	..	3 11	
66	Buchanan, R. L. ..	„	8	..	0 9 0 „	3 11	1 3	5 2	
67	Harwood, W. G. ..	„	8	..	0 8 0 „	3 11	..	3 11	
68	Moody, L.	„	8	..	0 8 0 „	3 11	..	3 11	
69	Boyle, J. P.	„	8	..	0 8 0 „	3 11	..	3 11	
70	Jamieson, J. H. ..	„	8	..	0 8 0 „	3 11	..	3 11	
71	McMillan, W. C. A. ..	„	8	..	0 8 0 „	3 11	..	3 11	
72	Sutton, G. H... ..	„	8	..	0 8 0 „	3 11	..	3 11	
73	Wright, J.	„	8	..	0 8 0 „	3 10	..	3 10	
74	O'Neill, W.	„	8	..	0 8 0 „	3 10	..	3 10	
75	Wheldon, A. J. ..	„	8	..	0 8 0 „	3 10	..	3 10	
76	Colley, W. L... ..	„	8	..	0 8 0 „	3 10	..	3 10	
77	Feasey, R. G. ..	„	8	..	0 8 0 „	3 10	..	3 10	
78	Simpkins, H... ..	„	8	..	0 8 0 „	3 10	..	3 10	
79	Beattie, C. L... ..	„	8	..	0 8 0 „	3 10	..	3 10	
80	Berry, R. L.	„	8	..	0 8 0 „	3 9	..	3 9	
81	Allen, J.	„	8	..	0 8 0 „	3 9	..	3 9	
82	Clark, J. H.	„	8	..	0 9 0 „	4 0	1 1	5 1	
83	Tonkin, R. E. ..	„	8	..	0 8 0 „	3 9	..	3 9	
84	Menzies, J. R. ..	„	8	..	0 7 0 „	5 4	..	5 4	
85	Bryden, W. C. ..	„	8	..	0 8 0 „	3 9	..	3 9	
86	McFarlane, H. ..	„	8	..	0 8 0 „	4 0	..	4 0	
87	Allan, J. H. L. ..	„	8	..	0 8 0 „	3 8	..	3 8	
88	Thomas, R. P. ..	„	8	..	0 8 0 „	3 8	..	3 8	
89	Dale, A. E.	„	8	..	0 8 0 „	3 8	..	3 8	
90	Beer, J. C.	„	8	..	0 8 0 „	3 8	..	3 8	
91	Mackie, W.	„	8	..	0 8 0 „	3 8	..	3 8	
92	Burney, C.	„	8	..	0 8 0 „	3 8	..	3 8	
93	Kennedy, J.	„	8	..	0 8 0 „	3 8	..	3 8	
94	Johnson, A. E. ..	„	8	..	0 8 0 „	3 8	..	3 8	
95	Brenan, A. T. ..	„	8	..	0 8 0 „	3 7	..	3 7	
96	Woodhill, J. T. ..	„	8	..	0 8 0 „	3 6	..	3 6	

Railway Department Classification, 1913—*continued.*

SECOND DIVISION—*continued.*

Class 2: Locomotive—continued.

Prog. No.	Name.	Classification.				Service			Remarks.
		Designation.	Subclass.	Grade.	Rate of Pay	Since last appointed.	Prior to Date last appointed.	For Superannuation Purposes.	
					£ s. d.	Y. M.	Y. M.	Y. M.	
97	Richardson, W. R.	Cleaner	8	..	0 8 0 per diem	3 6	..	3 6	
98	Mullen, T. F.	„	8	..	0 9 0 „	3 6	1 0	4 6	
99	Davidson, L. G.	„	8	..	0 8 0 „	3 5	..	3 5	
100	Burnell, R. H.	„	8	..	0 8 0 „	3 5	..	3 5	
101	Woodrow, W. W.	„	8	..	0 8 0 „	3 5	0 4	3 9	
102	Gembitzky, A. B. M.	„	8	..	0 9 0 „	3 5	1 5	4 10	
103	Cogle, J. F.	„	8	..	0 8 0 „	3 5	..	3 5	
104	Watts, E. F.	„	8	..	0 8 0 „	3 4	..	3 4	
105	Cooney, T.	„	8	..	0 8 0 „	3 4	..	3 4	
106	Steel, J. A.	„	8	..	0 8 0 „	3 3	..	3 3	
107	Collie, D. R.	„	8	..	0 8 0 „	3 3	..	3 3	
108	Smith, P. A.	„	8	..	0 8 0 „	3 3	..	3 3	
109	Lawson, H. W.	„	8	..	0 8 0 „	3 3	..	3 3	
110	Tutt, A. D.	„	8	..	0 8 0 „	3 3	..	3 3	
111	Dodds, J. T. K.	„	8	..	0 8 0 „	3 3	..	3 3	
112	Reed, S. H.	„	8	..	0 8 0 „	3 3	..	3 3	
113	Jansen, F. A.	„	8	..	0 8 0 „	3 3	..	3 3	
114	Lewington, H. C.	„	8	..	0 8 0 „	3 3	..	3 3	
115	Allen, C.	„	8	..	0 8 0 „	3 3	1 1	4 4	
116	Bell, J. C.	„	8	..	0 8 0 „	3 2	..	3 2	
117	Allerby, F. C.	„	8	..	0 8 0 „	3 2	..	3 2	
118	Davies, J. B.	„	8	..	0 9 0 „	3 2	1 11	5 1	
119	Payne, J. P.	„	8	..	0 8 0 „	3 2	..	3 2	
120	Moosman, L. J.	„	8	..	0 8 0 „	3 2	..	3 2	
121	Annabell, A.	„	8	..	0 8 0 „	3 2	..	3 2	
122	Southee, C.	„	8	..	0 8 0 „	3 2	..	3 2	
123	Reed, J. A.	„	8	..	0 8 0 „	3 2	..	3 2	
124	Cameron, J.	„	8	..	0 8 0 „	3 2	..	3 2	
125	Hannah, A.	„	8	..	0 8 0 „	3 2	..	3 2	
126	Tuohy, T. V.	„	8	..	0 8 0 „	3 2	..	3 2	
127	Mudford, J. L.	„	8	..	0 8 0 „	3 1	..	3 1	
128	Knight, R. P.	„	8	..	0 8 0 „	3 1	..	3 1	
129	Lawson, J. J.	„	8	..	0 8 0 „	3 1	..	3 1	
130	McCleary, E. M. L.	„	8	..	0 8 0 „	3 1	..	3 1	
131	Tarrant, L. T.	„	8	.	0 8 0 „	3 1	..	3	
132	Thompson, C. W.	„	8	..	0 8 0 „	3 1	..	3 1	
133	Barrett, W. E.	„	8	..	0 8 0 „	3 1	..	3 1	
134	Jenkins, A. A.	„	8	..	0 8 0 „	3 1	..	3 1	
135	Hawke, H. G.	„	8	..	0 8 0 „	3 1	..	3 1	
136	Simpson, W. W. C.	„	8	..	0 8 0 „	3 1	..	3 1	
137	Connett, F. C. W.	„	8	..	0 7 0 „	3 1	..	3 1	
138	Ching, T. J.	„	8	..	0 8 0 „	3 1	..	3 1	
139	Meiklejohn, A. B.	„	8	..	0 8 0 „	3 1	..	3 1	
140	Parsons, D. I.	„	8	..	0 8 0 „	3 0	..	3 0	
141	McConnell, R. J. P.	„	8	..	0 8 0 „	3 0	..	3 0	
142	Clarke, C. H.	„	8	..	0 8 0 „	3 0	..	3 0	
143	McGowan, W. F.	„	8	..	0 8 0 „	3 0	..	3 0	
144	Jones, F. A. A.	„	8	..	0 8 0 „	3 0	..	3 0	
145	Thompson, F. G. S.	„	8	..	0 8 0 „	3 0	..	3 0	
146	Charles, E. J.	„	8	..	0 7 0 „	3 0	..	3 0	
147	Davidson, J. H.	„	8	..	0 7 0 „	3 0	..	3 0	
148	Hyde, F. C.	„	8	..	0 7 0 „	3 0	..	3 0	
149	Fairley, L. D. D.	„	8	..	0 7 0 „	3 0	..	3 0	
150	Kendrick, W. T.	„	8	..	0 9 0 „	3 0	1 5	4 5	
151	Hartill, R. J.	„	8	..	0 7 0 „	3 0	..	3 0	
152	Macdonald, E. G.	„	8	..	0 7 0 „	2 11	..	2 11	
153	Cooke, W. F.	„	8	..	0 7 0 „	2 11	..	2 11	
154	Guthrie, A. H.	„	8	..	0 7 0 „	5 1	..	5 1	
155	Kidd, J. J.	„	8	..	0 8 0 „	2 11	0 2	3 1	
156	Davis, M.	„	8	..	0 7 0 „	2 11	..	2 11	
157	Taylor, H. C.	„	8	..	0 7 0 „	2 11	..	2 11	
158	Ryan, P. A.	„	8	..	0 7 0 „	2 11	..	2 11	
159	Hart, F.	„	8	..	0 7 0 „	2 11	..	2 11	
160	Jarrett, M.	„	8	..	0 7 0 „	2 11	..	2 11	
161	Heywood, C.	„	8	..	0 8 0 „	2 10	0 8	3 6	
162	Crawford, A. D.	„	8	..	0 7 0 „	2 10	..	2 10	
163	Holwell, H. H.	„	8	..	0 8 0 „	2 10	1 8	4 6	
164	Mathews, J. P.	„	8	..	0 7 0 „	2 10	..	2 10	
165	Thomson, W. J.	„	8	..	0 7 0 „	2 10	..	2 10	
166	Ash, J. A.	„	8	..	0 7 0 „	2 10	..	2 10	
167	Marshall, C. E.	„	8	..	0 8 0 „	2 9	0 11	3 8	
168	Cornwall, J. H.	„	8	..	0 7 0 „	2 9	..	2 9	
169	Murphy, M. J.	„	8	..	0 7 0 „	2 8	..	2 8	
170	Broome, H. S.	„	8	..	0 7 0 „	2 8	..	2 8	
171	Garforth, C. A.	„	8	..	0 7 0 „	2 8	..	2 8	
172	O'Brien, A. M.	„	8	..	0 7 0 „	2 8	..	2 8	
173	Firth, M. J.	„	8	..	0 7 0 „	2 8	..	2 8	

RAILWAY DEPARTMENT CLASSIFICATION, 1913—*continued.*

Prog. No.	Name.	Classification.				Service			Remarks.
		Designation.	Subclass.	Grade.	Rate of Pay	Since last appointed.	Prior to Date last appointed.	For Superannuation Purposes.	
		SECOND DIVISION—*continued.* *Class 2: Locomotive*—continued.			£ s. d.	Y. M.	Y. M.	Y. M.	
174	Hayward, A. R.	Cleaner	8	..	0 7 0 per diem	2 7	..	2 7	
175	Jarman, N. S.	„	8	..	0 7 0 „	2 7	..	2 7	
176	Pike, H. J.	„	8	..	0 7 0 „	2 7	..	2 7	
177	Boeson, M. C.	„	8	..	0 7 0 „	2 7	..	2 7	
178	Smith, I. J.	„	8	..	0 7 0 „	2 7	..	2 7	
179	Fraser, T.	„	8	..	0 7 0 „	2 7	..	2 7	
180	O'Brien, D.	„	8	..	0 7 0 „	2 7	..	2 7	
181	Morton, T. H.	„	8	..	0 7 0 „	2 7	0 5	2 7	
182	McKenney, J. F.	„	8	..	0 7 0 „	2 7	..	2 7	
183	Manning, H. G.	„	8	..	0 7 0 „	2 6	..	2 6	
184	Whishaw, B. G.	„	8	..	0 7 0 „	2 6	..	2 6	
185	Aiken, R. V.	„	8	..	0 7 0 „	2 5	..	2 5	
186	Gray, A. F.	„	8	..	0 7 0 „	2 5	..	2 5	
187	Hodren, W. L.	„	8	..	0 7 0 „	2 5	..	2 5	
188	Fletcher, T. C. W.	„	8	..	0 7 0 „	2 5	..	2 5	
189	Woollett, W. H.	„	8	..	0 7 0 „	2 5	..	5 7	
190	Gilmore, R. J.	„	8	..	0 7 0 „	2 4	..	2 4	
191	Starkey, L. E.	„	8	..	0 7 0 „	2 4	..	2 4	
192	Ackland, C. W.	„	8	..	0 7 0 „	2 4	..	2 4	
193	O'Grady, T. C.	„	8	..	0 7 0 „	2 4	..	2 4	
194	McGregor, A. E.	„	8	..	0 7 0 „	2 3	..	2 3	
195	McCurdy, R. H.	„	8	..	0 7 0 „	2 3	..	2 3	
196	Nicol, B. A. D.	„	8	..	0 7 0 „	2 3	..	2 3	
197	Hamilton, J. E.	„	8	..	0 7 0 „	2 3	..	2 3	
198	Sharman, J. I.	„	8	..	0 7 0 „	2 3	..	2 3	
199	Nelson, W. P.	„	8	..	0 7 0 „	2 3	..	2 3	
200	Bailey, S. J.	„	8	..	0 7 0 „	2 2	..	2 2	
201	Ardern, W. C.	„	8	..	0 7 0 „	2 2	..	2 2	
202	Lewin, H. A.	„	8	..	0 7 0 „	2 2	..	2 2	
203	Boyd, J. W.	„	8	..	0 7 0 „	2 2	..	2 2	
204	Hiddleston, W.	„	8	..	0 7 0 „	2 2	0 1	2 3	
205	O'Connell, C.	„	8	..	0 7 0 „	2 2	..	2 2	
206	English, C.	„	8	..	0 7 0 „	2 2	0 11	2 2	
207	Donaldson, R.	„	8	..	0 7 0 „	2 2	..	2 2	
208	Paterson, J. R.	„	8	..	0 7 0 „	2 2	..	2 2	
209	Pullan, R. W.	„	8	..	0 7 0 „	2 2	..	2 2	
210	Stephenson, T. H.	„	8	..	0 7 0 „	2 2	..	2 2	
211	Morgan, W. T.	„	8	..	0 7 0 „	2 2	..	2 2	
212	Dyer, C. A.	„	8	..	0 7 0 „	2 2	0 1	2 3	
213	Latimer, J. E.	„	8	..	0 7 0 „	2 2	..	2 2	
214	Anderson, P.	„	8	..	0 7 0 „	2 2	..	2 2	
215	Page, C. F.	„	8	..	0 7 0 „	2 1	.	2 1	
216	Keat, A. V.	„	8	..	0 7 0 „	2 1	..	2 1	
217	Sowerby, F. H.	„	8	..	0 7 0 „	2 1	..	2 1	
218	Channon, J. W.	„	8	..	0 7 0 „	2 1	..	2 1	
219	Elliott, T. H. V.	„	8	..	0 7 0 „	2 1	..	2 1	
220	Vaughan, P. J.	„	8	..	0 7 0 „	2 1	..	2 1	
221	Harris, C. C.	„	8	..	0 7 0 „	2 1	..	2 1	
222	Bateman, F. H.	„	8	..	0 7 0 „	2 1	..	2 1	
223	Dale, J.	„	8	..	0 7 0 „	2 1	..	2 1	
224	O'Connor, P.	„	8	..	0 7 0 „	2 1	..	2 1	
225	Bowmar, A. J.	„	8	..	0 7 0 „	2 0	..	2 0	
226	Flynn, J. D. J.	„	8	..	0 7 0 „	2 0	..	2 0	
227	Horscroft, W. C.	„	8	..	0 7 0 „	2 0	0 5	2 5	
228	Bishell, I.	„	8	..	0 7 0 „	2 0	..	2 0	
229	Larsen, A. C.	„	8	..	0 6 0 „	2 0	..	2 0	
230	Hubbard, C.	„	8	..	0 6 0 „	2 0	..	2 0	
231	Prentice, L. K.	„	8	..	0 6 0 „	2 0	..	2 0	
232	McGregor, J.	„	8	..	0 7 0 „	1 11	0 10	2 9	
233	Pain, H. T.	„	8	..	0 6 0 „	1 11	..	1 11	
234	Francis, H. N. H.	„	8	..	0 6 0 „	1 11	..	1 11	
235	Glynn, W. J.	„	8	..	0 6 0 „	2 2	..	2 2	
236	Smith, A. M. D.	„	8	..	0 6 0 „	1 10	..	1 10	
237	Dower, H. R.	„	8	..	0 7 0 „	1 10	0 11	2 9	
238	Beecroft, G. R.	„	8	..	0 6 0 „	1 10	..	1 10	
239	Campbell, R.	„	8	..	0 6 0 „	1 10	..	1 10	
240	Nixon, F. J.	„	8	..	0 6 0 „	1 10	..	1 10	
241	Dwyer, F. P.	„	8	..	0 6 0 „	1 10	..	1 10	
242	Godfrey, W. G.	„	8	..	0 6 0 „	1 10	..	1 10	
243	Gibson, J. A.	„	8	..	0 6 0 „	1 9	..	1 9	
244	Allen, S. G.	„	8	..	0 6 0 „	1 9	..	1 9	
245	Jory, P. J.	„	8	..	0 6 0 „	1 9	..	1 9	
246	Harding, W. J.	„	8	..	0 7 0 „	1 9	1 11	3 8	
247	Stedman, S. I.	„	8	..	0 6 0 „	1 9	..	1 9	
248	Morrissey, G. P.	„	8	..	0 6 0 „	1 9	..	1 9	
249	Cave, M. K.	„	8	..	0 6 0 „	1 8	..	1 8	
250	Hutchins, A. H.	„	8	..	0 6 0 „	1 8	..	1 8	

RAILWAY DEPARTMENT CLASSIFICATION, 1913—*continued.*

Prog. No.	Name.	Classification.				Service			Remarks
		Designation.	Subclass.	Grade.	Rate of Pay	Since last appointed.	Prior to Date last appointed.	For Superannuation Purposes.	
		SECOND DIVISION—*continued.*							
		Class 2: Locomotive—continued.							
					£ s. d.	Y. M.	Y. M.	Y. M.	
251	Codlin, P.	Cleaner	8	..	0 6 0 per diem	1 8	..	1 8	
252	Passman, J. W.	„	8	..	0 6 0 „	1 8	..	1 8	
253	Spowart, M. W.	„	8	..	0 6 0 „	1 8	..	1 8	
254	McKeagg, R. A.	„	8	..	0 6 0 „	1 8	..	1 8	
255	Roger, D. A.	„	8	..	0 6 0 „	1 8	..	1 8	
256	Jones, R. N.	„	8	..	0 6 0 „	1 8	..	1 8	
257	Pateman, J. H.	„	8	..	0 6 0 „	1 8	..	1 8	
258	Gillick, J.	„	8	..	0 7 0 „	1 8	1 1	2 9	
259	Sutherland, W. A.	„	8	..	0 7 0 „	1 8	0 10	2 6	
260	Nicholson, H. K.	„	8	..	0 6 0 „	1 8	..	1 8	
261	Schaufelberger, F.	„	8	..	0 6 0 „	1 8	..	1 8	
262	Curtis, T. H.	„	8	..	0 6 0 „	1 8	..	1 8	
263	McDonald, L. F.	„	8	..	0 6 0 „	1 8	..	1 8	
264	Bryson, J.	„	8	..	0 6 0 „	1 8	..	1 8	
265	Wigmore, N. B.	„	8	..	0 6 0 „	1 8	..	1 8	
266	Bryant, F. G.	„	8	..	0 6 0 „	1 7	..	1 7	
267	McMullen, H.	„	8	..	0 6 0 „	1 7	..	1 7	
268	Beswick, C. T.	„	8	..	0 6 0 „	1 7	..	1 7	
269	Ettershank, L. R.	„	8	..	0 6 0 „	1 7	..	1 7	
270	Huckstep, L. S.	„	8	..	0 6 0 „	1 7	..	1 7	
271	Jackson, W.	„	8	..	0 6 0 „	1 7	..	1 7	
272	Muir, J. C.	„	8	..	0 6 0 „	1 7	..	1 7	
273	Pearse, R.	„	8	..	0 6 0 „	1 7	..	1 7	
274	Kirker, C. G.	„	8	..	0 6 0 „	1 7	..	1 7	
275	Hunt, W. J.	„	8	..	0 6 0 „	1 7	..	1 7	
276	Samuel, W.	„	8	..	0 6 0 „	1 7	..	1 7	
277	O'Carroll, T. D.	„	8	..	0 6 0 „	1 7	..	1 7	
278	Wilson, E. H.	„	8	..	0 6 0 „	1 7	..	1 7	
279	Hooper, G. H.	„	8	..	0 6 0 „	1 7	..	1 7	
280	Julian, D. M.	„	8	..	0 6 0 „	1 10	..	1 10	
281	Dale, R. J.	„	8	..	0 6 0 „	1 6	..	1 6	
282	Campbell, J. G.	„	8	..	0 6 0 „	1 6	..	1 6	
283	Fisher, R. G.	„	8	..	0 6 0 „	1 6	..	1 6	
284	Westneat, F. R.	„	8	..	0 6 0 „	1 6	..	1 6	
285	Taylor, T. C.	„	8	..	0 6 0 „	1 9	..	1 9	
286	Lefevre, E. A. L.	„	8	..	0 6 0 „	1 6	..	1 6	
287	Mather, A. B. W.	„	8	..	0 6 0 „	1 6	..	1 6	
288	Forrest, J. H.	„	8	..	0 6 0 „	1 5	..	1 5	
289	Rowland, A. A.	„	8	..	0 6 0 „	1 5	..	1 5	
290	Marshall, J. T.	„	8	..	0 6 0 „	1 5	..	1 5	
291	Williams, J.	„	8	..	0 6 0 „	1 5	..	1 5	
292	Halligan, W.	„	8	..	0 7 0 „	1 5	1 2	1 5	
293	Newson, S. S.	„	8	..	0 6 0 „	1 4	..	1 4	
294	Thomson, F. H.	„	8	..	0 6 0 „	1 4	..	1 4	
295	Douglas, W. J.	„	8	..	0 6 0 „	1 4	..	1 4	
296	Cunningham, F. H.	„	8	..	0 6 0 „	1 4	..	1 4	
297	Butler, W. M.	„	8	..	0 6 0 „	1 4	0 4	1 4	
298	Cole, W. S. D.	„	8	..	0 6 0 „	1 4	..	1 4	
299	Forbes, J.	„	8	..	0 6 0 „	1 4	..	1 4	
300	Flynn, P.	„	8	..	0 6 0 „	1 4	..	1 4	
301	O'Brien, D. A.	„	8	..	0 6 0 „	1 4	..	1 4	
302	McLelland, R.	„	8	..	0 6 0 „	1 4	..	1 4	
303	Johnson, N. W.	„	8	..	0 6 0 „	1 4	..	1 4	
304	McNeil, L. A.	„	8	..	0 6 0 „	1 4	..	1 4	
305	Galbraith, A.	„	8	..	0 6 0 „	1 4	..	1 4	
306	Comber, M.	„	8	..	0 6 0 „	1 4	0 3	1 4	
307	King, F. M.	„	8	..	0 6 0 „	1 4	..	1 4	
308	McGrail, C. H.	„	8	..	0 6 0 „	1 4	0 7	1 4	
309	Cowie, J. H.	„	8	..	0 6 0 „	1 4	..	1 4	
310	McCabe, B. A.	„	8	..	0 6 0 „	1 4	..	1 4	
311	Matheson, R. D.	„	8	..	0 6 0 „	1 4	..	1 4	
312	Dickson, H. A.	„	8	..	0 6 0 „	1 4	..	1 4	
313	Greatbatch, J. H.	„	8	..	0 6 0 „	1 4	..	1 4	
314	Mackenzie, J. N.	„	8	..	0 6 0 „	1 4	..	1 4	
315	Cole, R. S.	„	8	..	0 6 0 „	1 4	0 1	1 5	
316	Marquet, J. D.	„	8	..	0 6 0 „	1 3	..	1 3	
317	McEwan, D.	„	8	..	0 6 0 „	1 3	..	1 3	
318	Westfield, A.	„	8	..	0 6 0 „	1 3	..	1 3	
319	Silvester, G. F.	„	8	..	0 6 0 „	1 3	..	1 3	
320	Phillips, J. J.	„	8	..	0 6 0 „	1 3	..	1 3	
321	Webb, W. W.	„	8	..	0 6 0 „	1 3	..	1 3	
322	Barlow, J. S.	„	8	..	0 6 0 „	1 3	..	1 3	
323	Forward, F. E.	„	8	..	0 6 0 „	1 3	..	1 3	
324	Jones, D. R. R.	„	8	..	0 6 0 „	1 3	..	1 3	
325	Webberley, E. C.	„	8	..	0 6 0 „	1 3	..	1 3	
326	Neilson, W.	„	8	..	0 6 0 „	1 2	..	1 2	
327	McLean, E. J.	„	8	..	0 6 0 „	1 2	..	1 2	

RAILWAY DEPARTMENT CLASSIFICATION, 1913—*continued.*

SECOND DIVISION—*continued.*

Class 2: Locomotive—continued.

Prog No.	Name	Classification				Service			Remarks
		Designation.	Subclass.	Grade.	Rate of Pay	Since last appointed.	Prior to Date last appointed.	For Superannuation Purposes.	
					£ s. d.	Y. M.	Y. M.	Y. M.	
328	Frost, F. E.	Cleaner	8	..	0 6 0 per diem	1 2	..	1 2	
329	Howie, W. A.	„	8	..	0 6 0 „	1 2	1 0	1 2	
330	Chettleburgh, J.	„	8	..	0 6 0 „	1 2	..	1 2	
331	Foster, A. A.	„	8	..	0 6 0 „	1 2	0 5	1 7	
332	Bond, P. R.	„	8	..	0 6 0 „	1 2	..	1 2	
333	Wallace, J. R.	„	8	..	0 6 0 „	1 2	..	1 2	
334	Connor, J.	„	8	..	0 6 0 „	1 2	..	1 2	
335	Small, C. R.	„	8	..	0 6 0 „	1 2	..	1 2	
336	Merrin, P. F. J.	„	8	..	0 6 0 „	1 2	..	1 2	
337	Bayne, G. A.	„	8	..	0 6 0 „	1 2	..	1 2	
338	Jones, S. R.	„	8	..	0 6 0 „	1 2	..	1 2	
339	Clapp, W. H. E.	„	8	..	0 6 0 „	1 2	..	1 2	
340	Alexander, H.	„	8	..	0 6 0 „	1 2	..	1 2	
341	Brook, J. T.	„	8	..	0 6 0 „	1 2	..	1 2	
342	Harkness, E.	„	8	..	0 6 0 „	1 2	..	1 2	
343	Wilson, A.	„	8	..	0 6 0 „	1 1	..	1 1	
344	Westerholm, N. B. O.	„	8	..	0 6 0 „	1 1	..	1 1	
345	Foster, C. W.	„	8	..	0 6 0 „	1 1	..	1 1	
346	Frame, G. S.	„	8	..	0 6 0 „	1 1	..	1 1	
347	Coleman, A. N.	„	8	..	0 6 0 „	1 1	..	1 1	
348	Burnell, T. J.	„	8	..	0 6 0 „	1 1	..	1 1	
349	Thompson, J. H.	„	8	..	0 6 0 „	1 1	..	1 1	
350	Bennett, N. V.	„	8	..	0 6 0 „	1 1	..	1 1	
351	Forsey, L. J. A.	„	8	..	0 6 0 „	1 1	..	1 1	
352	Jacob, E. C. H.	„	8	..	0 6 0 „	1 1	..	1 1	
353	Stringer, A. E.	„	8	..	0 6 0 „	1 1	..	1 1	
354	O'Connor, P. M.	„	8	..	0 6 0 „	1 1	..	1 1	
355	Gordon, W. J.	„	8	..	0 6 0 „	1 1	..	1 1	
356	Pope, G. W.	„	8	..	0 6 0 „	1 1	..	1 1	
357	Strickett, R. G.	„	8	..	0 6 0 „	1 1	..	1 1	
358	Nobes, G. T.	„	8	..	0 6 0 „	1 1	..	1 1	
359	Ballantyne, J. M.	„	8	..	0 6 0 „	1 1	..	1 1	
360	Henderson, N.	„	8	..	0 6 0 „	1 1	..	1 1	
361	O'Hanlon, F. G.	„	8	..	0 6 0 „	1 0	..	1 0	
362	Dormer, A.	„	8	..	0 6 0 „	1 0	..	1 0	
363	Dickie, A. D.	„	8	..	0 6 0 „	1 0	..	1 0	
364	Boddington, A. W.	„	8	..	0 6 0 „	1 0	..	1 0	
365	Heap, E.	„	8	..	0 6 0 „	1 0	..	1 0	
366	Dicker, J. D.	„	8	..	0 5 6 „	1 0	..	1 0	
367	Lilly, W. H. T.	„	8	..	0 5 6 „	1 0	..	1 0	
368	Marriott, P. S.	„	8	..	0 6 0 „	0 11	0 6	1 5	
369	Medlin, H. B.	„	8	..	0 5 6 „	0 11	..	0 11	
370	Nelson, G. O.	„	8	..	0 5 6 „	0 11	..	0 11	
371	Lyons, B. F.	„	8	..	0 5 6 „	0 11	..	0 11	
372	Kenyon, G. H. S.	„	8	..	0 5 6 „	0 11	..	0 11	
373	Johnson, W.	„	8	..	0 5 6 „	0 11	..	0 11	
374	Vaughan, W.	„	8	..	0 5 6 „	0 11	..	0 11	
375	Gray, J. A.	„	8	..	0 5 6 „	0 11	..	0 11	
376	Cameron, J.	„	8	..	0 6 0 „	0 11	0 11	1 10	
377	Cooke, A. J.	„	8	..	0 5 6 „	0 11	..	0 11	
378	McCormick, F. J.	„	8	..	0 5 6 „	0 11	..	0 11	
379	Knights, S.	„	8	..	0 5 6 „	0 10	..	0 10	
380	Jenner, F. T. R.	„	8	..	0 5 6 „	0 10	..	0 10	
381	Parkin, G. I. H.	„	8	..	0 5 6 „	4 1	..	4 1	
382	Clough, A. R.	„	8	..	0 5 6 „	0 10	0 4	0 10	
383	Farrow, W. J.	„	8	..	0 5 6 „	0 10	..	0 10	
384	Mooney, A.	„	8	..	0 5 6 „	0 10	..	0 10	
385	Gardner, J. H.	„	8	..	0 5 6 „	0 10	0 1	0 11	
386	Sillick, J. J.	„	8	..	0 5 6 „	0 10	..	0 10	
387	Robertson, D. L. J.	„	8	..	0 5 6 „	0 9	..	0 9	
388	Knaggs, W. D.	„	8	..	0 5 6 „	0 9	..	0 9	
389	Thomas, J. H.	„	8	..	0 5 6 „	0 9	..	0 9	
390	Cobden, L. L. B.	„	8	..	0 5 6 „	0 9	..	0 9	
391	Norris, E. H.	„	8	..	0 5 6 „	1 0	..	1 0	
392	Guthrie, M.	„	8	..	0 5 6 „	0 9	..	0 9	
393	Pearce, J. G.	„	8	..	0 5 6 „	0 9	..	0 9	
394	Russell, C. S.	„	8	..	0 5 6 „	0 9	0 4	0 9	
395	Pilling, S. C.	„	8	..	0 5 6 „	0 9	..	0 9	
396	Hintz, N. A. H.	„	8	..	0 5 6 „	0 9	..	0 9	
397	Russek, J. V.	„	8	..	0 5 6 „	0 9	..	0 9	
398	Price, F. A.	„	8	..	0 5 6 „	0 9	..	0 9	
399	Baker, L.	„	8	..	0 5 6 „	0 9	..	0 9	
400	Betts, P. H.	„	8	..	0 5 6 „	0 9	0 10	0 9	
401	Coulter, J. P.	„	8	..	0 5 6 „	0 9	0 9	1 6	
402	Rowland, M. F.	„	8	..	0 5 6 „	0 9	..	0 9	
403	Landrebe, G. H. T.	„	8	..	0 5 6 „	0 8	..	0 8	
404	Ballantine, D.	„	8	..	0 5 6 „	0 8	1 0	0 8	

RAILWAY DEPARTMENT CLASSIFICATION, 1913—*continued.*

SECOND DIVISION—*continued.*

Class 2: Locomotive—continued.

Prog. No.	Name.	Classification.				Service			Remarks.
		Designation.	Subclass.	Grade.	Rate of Pay.	Since last appointed.	Prior to Date last appointed.	For Superannuation Purposes.	
					£ s. d.	Y. M.	Y. M.	Y. M.	
405	Christie, W. J.	Cleaner	8	..	0 5 6 per diem	0 8	0 3	0 8	
406	Culley, F. J.	„	8	..	0 5 6 „	0 8	..	0 8	
407	Crocker, T. R.	„	8	..	0 5 6 „	0 8	..	0 8	
408	Corkill, C.	„	8	..	0 5 6 „	0 8	0 4	0 8	
409	Oliver, J. W.	„	8	..	0 5 6 „	0 8	..	0 8	
410	Cloke, J.	„	8	..	0 5 6 „	0 8	..	0 8	
411	Strickett, F. W.	„	8	..	0 5 6 „	0 8	..	0 8	
412	Pope, E. B.	„	8	..	0 5 6 „	0 8	..	0 8	
413	Smith, F. H.	„	8	..	0 5 6 „	0 8	0 4	1 0	
414	Neill, C. H.	„	8	..	0 5 6 „	0 8	..	0 8	
415	Olsen, W. J.	„	8	..	0 5 6 „	0 8	..	0 8	
416	Magnusson, O.	„	8	..	0 5 6 „	0 8	..	0 8	
417	Codd, R. E.	„	8	..	0 5 6 „	0 8	..	0 8	
418	Robinson, A. H.	„	8	..	0 5 6 „	0 8	..	0 8	
419	Hooper, G. S.	„	8	..	0 5 6 „	0 8	..	0 8	
420	Gillon, G. R.	„	8	..	0 5 6 „	0 8	..	0 8	
421	Crawshaw, A. L.	„	8	..	0 5 6 „	0 8	..	0 8	
422	Gordon, A. A.	„	8	..	0 5 6 „	0 8	..	0 8	
423	Cleave, J. P.	„	8	..	0 5 6 „	0 8	..	0 8	
424	Aspden, J. A.	„	8	..	0 5 6 „	0 8	..	0 8	
425	Till, A. C.	„	8	..	0 5 6 „	0 8	..	0 8	
426	Foster, E. R.	„	8	..	0 5 6 „	0 8	..	0 8	
427	Nielsen, E. R. B.	„	8	..	0 5 6 „	0 7	..	0 7	
428	Reade, A. G.	„	8	..	0 5 6 „	0 7	..	0 7	
429	Main, V. H.	„	8	..	0 5 6 „	0 7	..	0 7	
430	Nicholls, F. C.	„	8	..	0 5 6 „	0 7	..	0 7	
431	Olsen, C. V.	„	8	..	0 5 6 „	0 7	..	0 7	
432	Everett, C. L. M.	„	8	..	0 7 0 „	0 7	2 1	0 7	
433	Hamblyn, H. E.	„	8	..	0 5 6 „	0 7	..	0 7	
434	Keats, C.	„	8	..	0 5 6 „	0 7	0 2	0 7	
435	McCauley, J.	„	8	..	0 5 6 „	0 7	..	0 7	
436	Leslie, W. E.	„	8	..	0 5 6 „	0 7	..	0 7	
437	Drummond, J. E.	„	8	..	0 5 6 „	0 7	..	0 7	
438	Harvey, H. W.	„	8	..	0 5 6 „	0 7	..	0 7	
439	Lewin, A. E.	„	8	..	0 5 6 „	0 7	..	0 7	
440	Tunnicliffe, D. M.	„	8	..	0 5 6 „	0 7	..	0 7	
441	McDowell, R. J.	„	8	..	0 5 6 „	0 7	..	0 7	
442	Lang, C. H.	„	8	..	0 5 6 „	0 7	..	0 7	
443	Bateman, T. H.	„	8	..	0 5 6 „	0 6	..	0 6	
444	Dyer, C. F.	„	8	..	0 5 6 „	0 6	..	0 6	
445	Stokes, G. E.	„	8	..	0 5 6 „	0 6	..	0 6	
446	Henderson, T. W.	„	8	..	0 5 6 „	0 6	..	0 6	
447	Ringrose, G. A.	„	8	..	0 5 6 „	0 6	..	0 6	
448	Symonds, A. H.	„	8	..	0 5 6 „	0 6	..	0 6	
449	Marsh, J. W.	„	8	..	0 5 6 „	0 6	..	0 6	
450	Reynolds, S. O.	„	8	..	0 5 6 „	0 6	..	0 6	
451	Williams, A. L.	„	8	..	0 5 6 „	0 5	..	0 5	
452	Otto, W. E.	„	8	..	0 5 6 „	0 5	..	0 5	
453	Robertson, G.	„	8	..	0 5 6 „	0 5	..	0 5	
454	Robinson, G. J.	„	8	..	0 5 6 „	0 5	..	0 5	
455	Herrick, G. M.	„	8	..	0 5 6 „	0 5	..	0 5	
456	Perkins, B. J.	„	8	..	0 5 6 „	0 5	..	0 5	
457	Perry, A. E.	„	8	..	0 5 6 „	0 5	..	0 5	
458	Avery, F. W.	„	8	..	0 5 6 „	0 5	0 6	0 5	
459	McLennan, T. F.	„	8	..	0 5 6 „	0 5	0 4	0 5	
460	Sinclair, E. D.	„	8	..	0 5 6 „	0 5	..	0 5	
461	Blackburn, A. J.	„	8	..	0 5 6 „	0 5	..	0 5	
462	McCreanor, F.	„	8	..	0 5 6 „	0 5	..	0 5	
463	Carruthers, R. A.	„	8	..	0 5 6 „	0 5	..	0 5	
464	Ralston, W. J.	„	8	..	0 5 6 „	0 5	..	0 5	
465	Hardcastle, L.	„	8	..	0 5 6 „	0 5	..	0 5	
466	McAnnalley, H. J.	„	8	..	0 5 6 „	0 5	..	0 5	
467	Barnes, W. A.	„	8	..	0 5 6 „	0 5	0 8	0 5	
468	Hoskin, A.	„	8	..	0 5 6 „	0 5	..	0 5	
469	D'Arcy, W. J.	„	8	..	0 5 6 „	0 5	..	0 5	
470	Cain, G. J. T.	„	8	..	0 5 6 „	0 4	..	0 4	
471	Islip, E. E.	„	8	..	0 5 6 „	0 4	..	0 4	
472	Idiens, R. C.	„	8	..	0 5 6 „	0 4	..	0 4	
473	Hill, S.	„	8	..	0 5 6 „	0 4	..	0 4	
474	Walden, H. G.	„	8	..	0 5 6 „	0 4	..	0 4	
475	Cowens, R. J.	„	8	..	0 5 6 „	0 4	..	0 4	
476	Pearson, J. W.	„	8	..	0 5 6 „	0 4	..	0 4	
477	Kissell, E. N.	„	8	..	0 5 6 „	0 4	0 5	0 9	
478	McLeod, W. P.	„	8	..	0 5 6 „	0 4	..	0 4	
479	Parata, T.	„	8	..	0 5 6 „	0 4	..	0 4	
480	Barter, J. C.	„	8	..	0 5 6 „	0 4	..	0 4	
481	Horton, D. D.	„	8	..	0 5 6 „	0 4	..	0 4	

Railway Department Classification, 1913—*continued.*

SECOND DIVISION—*continued.*

Class 2: Locomotive—continued.

Prog. No.	Name.	Classification.				Service			Remarks.
		Designation.	Subclass.	Grade.	Rate of Pay	Since last appointed.	Prior to Date last appointed.	For Superannuation Purposes.	
					£ s. d.	Y. M.	Y. M.	Y. M.	
482	Jones, F. R.	Cleaner	8	..	0 5 6 per diem	0 4	..	0 4	
483	Wiles, P.	„	8	..	0 5 6 „	0 4	..	0 4	
484	Robertson, J. T.	„	8	..	0 5 6 „	0 4	..	0 4	
485	Kilner, F. T.	„	8	..	0 5 6 „	0 4	..	0 4	
486	Lawrence, D. W.	„	8	..	0 5 6 „	0 4	..	0 4	
487	Peacock, E. M.	„	8	..	0 5 6 „	0 4	..	0 4	
488	Fleming, A. A.	„	8	..	0 5 6 „	0 4	..	0 4	
489	Hickey, E.	„	8	..	0 5 6 „	0 4	..	0 4	
490	Hassett, E.	„	8	..	0 5 6 „	0 4	..	0 4	
491	Dunn, J.	„	8	..	0 5 6 „	0 4	..	0 4	
492	Giffney, J. M.	„	8	..	0 5 6 „	0 4	..	0 4	
493	Holland, A. E.	„	8	..	0 5 6 „	0 4	..	0 4	
494	Ahern, R. J.	„	8	..	0 5 6 „	0 4	..	0 4	
495	Costigan, P.	„	8	..	0 5 6 „	0 3	0 6	0 9	
496	McQueen, C. B.	„	8	..	0 5 6 „	0 3	..	0 3	
497	Phelan, W. P.	„	8	..	0 5 6 „	0 3	..	0 3	
498	Elliott, J.	„	8	..	0 5 6 „	0 3	..	0 3	
499	Woodcock, C.	„	8	..	0 5 6 „	0 3	..	0 3	
500	Smith, S. H. F.	„	8	..	0 5 6 „	0 3	1 0	1 3	
501	Daly, R. J.	„	8	..	0 5 6 „	0 3	..	0 3	
502	Fitzgerald, J. G.	„	8	..	0 5 6 „	0 3	..	0 3	
503	McKinlay, J. N.	„	8	..	0 5 6 „	0 3	..	0 3	
504	Burnside, V.	„	8	..	0 5 6 „	0 3	..	0 3	
505	Ryan, J. P.	„	8	..	0 5 6 „	0 3	0 6	0 3	
506	Edwards, A. M.	„	8	..	0 5 6 „	0 3	..	0 3	
507	Mackley, C.	„	8	..	0 5 6 „	0 3	..	0 3	
508	Wood, P. E.	„	8	..	0 5 6 „	0 3	..	0 3	
509	Paddy, F. H. M.	„	8	..	0 5 6 „	0 3	..	0 3	
510	Lovell, J. R.	„	8	..	0 5 6 „	0 3	..	0 3	
511	O'Brien, W. P.	„	8	..	0 5 6 „	0 3	..	0 3	
512	Murfitt, R. S. R.	„	8	..	0 5 6 „	0 3	..	0 3	
513	Condon, W. F.	„	8	..	0 5 6 „	0 2	0 4	0 6	
514	Bonisch, E. J.	„	8	..	0 5 6 „	0 2	..	0 2	
515	Prentis, V. E.	„	8	..	0 5 6 „	0 2	..	0 2	
516	Mallett, J.	„	8	..	0 5 6 „	0 2	..	0 2	
517	Rouse, F. J.	„	8	..	0 5 6 „	0 2	..	0 2	
518	Griffin, J.	„	8	..	0 5 6 „	0 2	..	0 2	
519	Stoupe, F.	„	8	..	0 5 6 „	0 2	..	0 2	
520	Brown, J. H.	„	8	..	0 5 6 „	0 2	..	0 2	
521	Field, D. J.	„	8	..	0 5 6 „	0 2	..	0 2	
522	Marshall, A.	„	8	..	0 5 6 „	0 2	..	0 2	
523	Treasure, H. O.	„	8	..	0 5 6 „	0 2	..	0 2	
524	Struthers, R. A.	„	8	..	0 5 6 „	0 2	..	0 2	
525	Fisher, L. N.	„	8	..	0 5 6 „	0 2	..	0 2	
526	Robertson, M. H.	„	8	..	0 5 6 „	0 2	..	0 2	
527	Nicolson, A. J.	„	8	..	0 5 6 „	0 2	..	0 2	
528	Shaw, W. J.	„	8	..	0 5 6 „	0 2	..	0 2	
529	McCombe, J. S.	„	8	..	0 5 6 „	0 2	..	0 2	
530	Neeson, P. J.	„	8	..	0 6 0 „	0 2	1 3	1 5	
531	Keen, H. P.	„	8	..	0 5 6 „	0 2	..	0 2	
532	Russell, R. M. L.	„	8	..	0 5 6 „	0 1	..	0 1	
533	McSwiggan, C. F.	„	8	..	0 5 6 „	0 1	..	0 1	
534	Mouat, L. C. C.	„	8	..	0 5 6 „	0 1	..	0 1	
535	Mapu, W.	„	8	..	0 5 6 „	0 1	..	0 1	
536	Johnson, C. E.	„	8	..	0 5 6 „	0 1	..	0 1	
537	Allen, W. S.	„	8	..	0 5 6 „	0 1	..	0 1	
538	Neas, W. F.	„	8	..	0 5 6 „	0 1	..	0 1	
539	Whitehead, A. A.	„	8	..	0 5 6 „	0 1	..	0 1	
540	Johnson, W.	„	8	..	0 5 6 „	0 1	..	0 1	
541	Kennerley, J. S.	„	8	..	0 5 6 „	0 1	..	0 1	
542	Sullivan, B.	„	8	..	0 5 6 „	0 1	..	0 1	
543	Semple, J. N.	„	8	..	0 5 6 „	0 1	..	0 1	
544	Greene, A. C.	„	8	..	0 5 6 „	0 1	..	0 1	
545	Hendry, F. D.	„	8	..	0 5 6 „	0 1	..	0 1	
546	Walsh, R. G. G.	„	8	..	0 5 6 „	0 1	..	0 1	
547	Griffin, J. G.	„	8	..	0 5 6 „	0 1	..	0 1	
548	Bilson, I. S. D.	„	8	..	0 5 6 „	0 1	..	0 1	
549	McDonald, J. E.	„	8	..	0 5 6 „	0 1	..	0 1	
550	Jardine, J. R.	„	8	..	0 5 6 „	0 1	..	0 1	
551	McConnachie, D. C.	„	8	..	0 5 6 „	0 1	..	0 1	
552	McLaren, P. A.	„	8	..	0 5 6 „	0 1	..	0 1	
553	Dore, G. R. C.	„	8	..	0 5 6 „	0 1	..	0 1	
554	White, J. L.	„	8	..	0 5 6 „	0 1	..	0 1	
555	Waterhouse, H. J. H.	„	8	..	0 5 6 „	0 1	..	0 1	
556	Owens, J. D. H.	„	8	..	0 5 6 „	15 days	..	15 days	
557	King, L. H.	„	8	..	0 5 6 „	15 „	..	15 „	
558	Haire, G. W.	„	8	..	0 5 6 „	15 „	..	15 „	

RAILWAY DEPARTMENT CLASSIFICATION, 1913—*continued.*

SECOND DIVISION—*continued.*

Class 2 : Locomotive—continued.

Prog. No.	Name.	Classification. Designation.	Subclass.	Grade.	Rate of Pay.	Service Since last appointed.	Service Prior to Date last appointed.	Service For Superannuation Purposes.	Remarks
					£ s. d.	Y. M.	Y. M.	Y. M.	
559	Dalley, C.	Cleaner	8	..	0 5 6 per diem	15 „	..	15 days	
560	O'Doherty, H. E.	„	8	..	0 5 6 „	15 „	..	15 „	
561	Dyer, N. T.	„	8	..	0 5 6 „	14 „	..	14 „	
562	Collins, H. P.	„	8	..	0 5 6 „	12 „	..	12 „	
563	Williams, L.	„	8	..	0 5 6 „	11 „	..	11 „	
564	Robbs, J. P.	„	8	..	0 5 6 „	11 „	..	11 „	
565	Woodcock, A. H.	„	8	..	0 5 6 „	5 „	..	5 „	
566	Stewart, N.	„	8	..	0 5 6 „	1 day	..	1 day	
567	James, E. S.	„	8	..	0 5 6 „	1 „	..	1 „	
568	Ryan, L.	„	8	..	0 5 6 „	1 „	..	1 „	
569	Bush, M. E.	„	8	..	0 5 6 „	1 „	..	1 „	
1	Hughes, J. E.	Washoutman	8	1	0 10 6 „	13 7	0 7	14 2	
2	Hatcher, W. A.	„	8	1	0 10 0 „	16 5	0 1	16 5	
3	Jackson, W. H.	„	8	1	0 10 0 „	12 11	..	12 11	
1	Edlin, J. H.	Crane-driver	8	1	0 10 6 „	30 0	..	30 0	
2	Fuller, A. C.	„	8	1	0 10 6 „	12 11	..	12 11	
3	Johnson, M.	„	8	1	0 10 6 „	18 5	..	18 5	
4	Wootton, W.	„	8	1	0 10 6 „	11 4	..	11 4	
5	Roche, F. C.	„	8	1	0 10 6 „	11 0	3 11	12 8	
6	Hay-Mackenzie, A. A.	„	8	1	0 10 6 „	11 0	4 4	15 4	
7	Toner, W.	„	8	1	0 10 6 „	7 0	9 9	14 8	
8	Webb, W.	„	8	1	0 10 6 „	6 2	0 6	6 8	
9	Brown, A. J.	„	8	1	0 10 6 „	6 0	5 6	11 6	
10	Roberts, E. L.	„	8	1	0 10 6 „	11 0	5 10	16 10	
11	Roche, P.	„	8	1	0 10 6 „	2 0	7 3	9 3	
12	Hawkins, J.	„	8	1	0 10 6 „	18 9	2 2	18 9	
13	Hale, T.	„	8	1	0 10 0 „	5 0	5 5	10 5	
14	Hopkinson, A.	„	8	1	0 10 0 „	2 0	6 5	8 5	
15	Carruthers, J. M.	„	8	1	0 10 6 „	1 0	7 0	7 10	
16	Hobbs, R. H.	„	8	1	0 10 0 „	1 0	6 9	7 9	
1	Powell, G. A.	„	8	2	0 9 6 „	12 2	2 3	14 5	
2	Smither, J. L.	„	8	2	0 9 6 „	1 day	6 0	..	
1	Nuttall, W.	Shop-engineman	8	1	0 10 6 „	31 1	..	31 1	
2	Gordon, R.	„	8	1	0 10 6 „	31 3	6 3	31 3	
3	Pimley, J.	„	8	1	0 10 6 „	11 0	4 11	15 9	
4	Forrester, J.	„	8	1	0 10 6 „	32 3	..	32 3	
5	Glendinning, G.	„	8	1	0 10 6 „	36 4	..	36 4	
6	Child, H.	„	8	1	0 10 6 „	21 3	2 3	21 3	
7	Quested, J.	„	8	1	0 10 6 „	22 4	12 5	30 10	
8	Leahy, L. M. F.	„	8	1	0 10 6 „	14 1	..	14 1	
9	Young, D. T.	„	8	1	0 10 6 „	4 4	4 6	8 10	
10	Young, J. S.	„	8	1	0 10 6 „	4 4	2 3	6 7	
11	Overend, T. J.	„	8	1	0 10 6 „	6 0	6 11	12 11	
12	Futter, W. L.	„	8	1	0 10 6 „	6 0	5 5	11 5	
13	McHardy, G. B.	„	8	1	0 10 6 „	11 0	4 2	15 2	
14	Fitzgerald, A. J.	„	8	1	0 10 0 „	18 10	..	18 10	
15	Botting, R. J.	„	8	1	0 10 0 „	11 0	5 2	16 2	
16	Ritchie, W.	„	8	1	0 10 0 „	7 0	7 7	14 7	
17	Pearce, P.	„	8	1	0 10 0 „	12 7	0 9	13 4	
1	Stone, E. C.	„	8	2	0 9 6 „	18 0	..	18 0	
1	Owen, H.	Gasman	8	1	0 10 6 „	29 4	..	29 4	
2	Clark, J. A.	„	8	1	0 10 6 „	16 1	..	16 1	
3	Hodgson, T.	„	8	1	0 10 6 „	20 8	..	20 8	
4	Toner, E. S.	„	8	1	0 10 6 „	11 0	3 6	14 6	
5	Unverricht, C.	„	8	1	0 10 6 „	11 0	1 10	12 10	
6	Gatfield, J.	„	8	1	0 10 6 „	2 0	7 2	9 2	
7	McFedries, J. H.	„	8	1	0 10 6 „	6 0	6 11	12 11	
1	Drain, A. E.	„	8	2	0 9 6 „	11 0	3 8	14 7	
2	Adams, E. W.	„	8	2	0 9 6 „	2 0	6 11	8 11	
3	Daly, R. O.	„	8	2	0 9 6 „	1 0	5 2	6 2	
1	Ruck, G.	Storeman	8	1	0 10 0 „	22 6	..	22 6	
2	Gaze, G.	„	8	1	0 10 0 „	27 3	..	27 3	
3	Mann, A.	„	8	1	0 10 0 „	31 2	..	31 2	
4	Lynch, H. I.	„	8	1	0 10 0 „	23 1	..	23 1	
5	Robb, J.	„	8	1	0 10 0 „	20 0	..	20 0	
6	Barker, C. W.	„	8	1	0 10 0 „	6 0	6 6	12 6	
7	Bowden, W. J.	„	8	1	0 10 0 „	22 6	..	22 6	
8	Hickinbottom, W. J.	„	8	1	0 10 0 „	11 0	6 3	17 0	
9	Kelly, P. M.	„	8	1	0 10 0 „	9 3	..	9 3	
10	Poole, F. D.	„	8	1	0 10 0 „	1 day	5 9	..	

RAILWAY DEPARTMENT CLASSIFICATION, 1913—*continued.*

Prog. No.	Name.	Classification.				Service			Remarks.
		Designation.	Subclass.	Grade.	Rate of Pay.	Since last appointed.	Prior to Date last appointed.	For Superannuation Purposes.	
					SECOND DIVISION—*continued.*				
					Class 2: Locomotive—continued.				
					£ s. d.	Y. M.	Y. M.	Y. M.	
1	Rae, J.	Lifter	9	1	0 10 6 per diem	17 10	1 2	17 10	
2	Streeter, F. H. ..	″	9	1	0 10 6 ″	23 10	..	23 10	
3	Keegan, J.	Train-examiner ..	9	1	0 10 6 ″	19 11	..	19 11	
4	Morgan, G. H. ..	Lifter	9	1	0 10 6 ″	18 2	..	18 2	
5	Thomson, J.	Train-examiner ..	9	1	0 10 6 ″	19 1	..	19 1	
6	Bailey, A.	Lifter	9	1	0 10 6 ″	11 0	5 11	15 9	
7	Cronin, T.	″	9	1	0 10 6 ″	18 3	..	18 3	
8	Maddox, R. E. ..	Train-examiner ..	9	1	0 10 6 ″	11 0	4 4	14 8	
9	Mills, T. L.	Lifter	9	1	0 10 6 ″	11 0	3 4	14 4	
10	Archer, C. H. W. ..	Train-examiner ..	9	1	0 10 6 ″	11 0	1 10	12 10	
11	Cockburn, J.	″ ..	9	1	0 10 6 ″	11 0	4 4	14 8	
12	Brown, A. C.	Lifter	9	1	0 10 6 ″	14 0	2 7	16 4	
13	Kiernan, H. A. D. ..	Train-examiner ..	9	1	0 10 6 ″	20 0	..	20 0	
14	Elliott, T.	Lifter	9	1	0 10 6 ″	11 0	2 1	13 1	
15	Ousey, E. H.	Train-examiner (in charge of oil-engine)	9	1	0 10 6 ″	11 0	2 1	13 1	
16	Piper, W. J.	Train-examiner ..	9	1	0 10 6 ″	11 0	4 0	15 0	
17	Fitzpatrick, J. ..	″ ..	9	1	0 10 6 ″	11 0	5 9	14 7	
18	Campbell, H.	″ ..	9	1	0 10 6 ″	11 0	3 0	14 0	
19	White, H.	Lifter	9	1	0 10 6 ″	11 9	..	11 9	
20	Churchill, T.	Train-examiner (in charge of oil-engine)	9	1	0 10 6 ″	10 10	..	10 10	
21	Taylor, J. W.	Train-examiner ..	9	1	0 10 6 ″	11 0	5 2	16 2	
22	Arnold, H.	Lifter	9	1	0 10 6 ″	7 0	7 7	14 7	
23	Brown, H. C.	Train-examiner ..	9	1	0 10 6 ″	7 0	7 6	14 6	
24	Wakelin, H. J. ..	Lifter	9	1	0 10 6 ″	7 0	5 1	12 1	
25	Wheatley, R.	″	9	1	0 10 6 ″	19 2	..	19 2	
26	Murrow, W. S. ..	Train-examiner ..	9	1	0 10 6 ″	19 2	..	19 2	
27	Dick, C. J.	″ ..	9	1	0 10 6 ″	12 6	..	12 6	
28	West, A. W.	″ ..	9	1	0 10 6 ″	10 0	6 5	16 5	
29	Shaw, W. R.	″ ..	9	1	0 10 6 ″	10 7	0 1	10 8	
30	Buchanan, J. H. ..	″ ..	9	1	0 10 6 ″	6 0	7 1	13 1	
31	McDonald, J.	Lifter	9	1	0 10 6 ″	6 0	6 8	12 8	
32	Feil, M. B.	″	9	1	0 10 6 ″	6 0	13 10	12 8	
33	James, E. N.	″	9	1	0 10 6 ″	6 0	6 8	12 8	
34	Nightingale, C. ..	Train-examiner ..	9	1	0 10 6 ″	6 0	6 4	12 4	
35	Patterson, A.	″ ..	9	1	0 10 6 ″	6 0	6 2	12 2	
36	Smith, E. W.	″ ..	9	1	0 10 6 ″	6 0	6 1	12 1	
37	Morse, I.	Lifter	9	1	0 10 6 ″	6 0	6 0	12 0	
38	Smith, R. E.	″	9	1	0 10 6 ″	6 0	8 2	11 1	
39	Doherty, P.	Train-examiner ..	9	1	0 10 6 ″	6 0	5 1	11 1	
40	Davidson, J. H. ..	″ ..	9	1	0 10 6 ″	6 0	5 0	11 0	
41	Seeling, W. H. ..	Lifter	9	1	0 10 6 ″	11 0	2 5	13 5	
42	Keeley, C.	Train-examiner (in charge of oil-engine)	9	1	0 10 6 ″	31 1	..	31 1	
43	Currie, J.	Train-examiner ..	9	1	0 11 0 ″	4 4	18 0	22 4	
44	Miller, T. R. J. ..	″ ..	9	1	0 10 6 ″	4 4	6 10	11 2	
45	McFarlane, J.	Lifter	9	1	0 10 6 ″	19 0	..	19 0	
46	Carpenter, W. A. ..	″	9	1	0 10 6 ″	11 0	1 9	12 9	
47	Ramsay, T.	″	9	1	0 10 6 ″	12 7	4 11	..	
48	Seaton, H. J.	″	9	1	0 10 6 ″	12 4	2 1	14 5	
49	Smith, A. G.	″	9	1	0 10 6 ″	36 3	..	36 3	
50	Blackwood, J.	″	9	1	0 10 6 ″	32 6	..	32 6	
51	Di Rago, A.	Train-examiner ..	9	1	0 10 6 ″	11 0	4 8	15 7	
52	Aitken, G.	Lifter	9	1	0 10 6 ″	10 7	..	10 7	
53	Sharman, H.	Train-examiner ..	9	1	0 10 6 ″	13 5	0 11	14 4	
54	O'Driscoll, P. J. ..	Lifter	9	1	0 10 6 ″	10 0	2 6	12 6	
55	Robb, J. G.	″	9	1	0 10 6 ″	11 0	4 6	15 6	
56	Evans, W.	Train-examiner ..	9	1	0 10 6 ″	12 11	..	12 11	
57	Reidy, M.	Lifter	9	1	0 10 6 ″	18 9	0 10	19 7	
58	Smith, S. R.	″	9	1	0 10 6 ″	11 0	3 9	14 9	
59	Watt, R.	Train-examiner ..	9	1	0 10 6 ″	11 0	4 2	14 6	
60	Fuller, J. W.	Lifter	9	1	0 10 6 ″	23 6	..	23 6	
61	Jones, G. E.	Train-examiner ..	9	1	0 10 6 ″	11 0	4 10	15 10	
62	Tasker, G. R.	Lifter	9	1	0 10 0 ″	6 0	8 2	14 2	
63	Stewart, H. M. ..	″	9	1	0 10 0 ″	11 0	3 6	14 6	
64	Purvis, G. W.	″	9	1	0 10 0 ″	11 0	1 8	12 8	
65	Watson, W. G. ..	Train-examiner ..	9	1	0 10 0 ″	11 0	2 4	13 4	
66	Murdock, J.	Lifter	9	1	0 10 0 ″	14 9	..	14 9	
67	Worner, S.	″	9	1	0 10 0 ″	19 2	..	19 2	
68	O'Donnell, W. ..	Train-examiner ..	9	1	0 10 0 ″	11 0	3 3	14 3	
69	Fountaine, J. C. ..	Lifter	9	1	0 10 0 ″	11 0	4 9	15 9	
70	Terry, F. J.	″	9	1	0 10 0 ″	10 0	2 6	12 6	
71	Hayes, E.	Train-examiner (in charge of oil-engine)	9	1	0 10 0 ″	11 0	4 3	14 8	
72	Earney, A. J.	Train-examiner ..	9	1	0 10 0 ″	7 0	8 0	15 0	
73	Jolly, W. S.	Lifter	9	1	0 10 0 ″	6 0	7 4	13 1	

RAILWAY DEPARTMENT CLASSIFICATION, 1913—*continued.*

SECOND DIVISION—*continued.*

Class 2: Locomotive—continued.

Prog. No.	Name	Classification: Designation	Subclass	Grade	Rate of Pay	Service: Since last appointed Y.	M.	Prior to Date last appointed Y.	M.	For Superannuation Purposes Y.	M.	Remarks.
					£ s. d.							
74	Stewart, W.	Train-examiner	9	1	0 10 0 per diem	6	0	6	9	12	9	
75	Gray, W. T.	Lifter	9	1	0 10 0 „	6	0	6	5	12	5	
76	Crowhurst, J. H.	Train-examiner	9	1	0 10 0 „	6	0	6	2	12	2	
77	Ireland, H. D.	Lifter	9	1	0 10 0 „	11	0	3	8	14	8	
78	Everett, W. H.	Train-examiner	9	1	0 10 0 „	11	0	3	3	14	3	
79	Jones, E. W.	Lifter	9	1	0 10 0 „	10	0	2	6	12	6	
80	Brace, J. E.	Train-examiner	9	1	0 10 0 „	7	0	3	8	10	8	
81	Higgins, J.	Lifter	9	1	0 10 0 „	13	0	2	10	13	8	
82	Humphrey, J. H.	Train-examiner	9	1	0 10 0 „	6	0	8	2	14	2	
83	Hall, W. E.	„	9	1	0 10 0 „	11	0	2	3	13	3	
84	Firkin, S. S.	Lifter	9	1	0 10 0 „	6	0	5	5	11	5	
85	George, J.	„	9	1	0 10 0 „	6	0	5	10	11	10	
86	Jones, A. G.	„	9	1	0 10 0 „	5	0	5	11	10	11	
87	Byford, G. D.	„	9	1	0 10 0 „	5	0	5	11	10	11	
88	Machen, J. W.	Train-examiner (in charge of oil-engine)	9	1	0 10 0 „	5	0	7	9	10	5	
89	Brown, C. J.	Train-examiner	9	1	0 10 0 „	5	0	5	0	10	0	
90	Dyer, W.	„	9	1	0 10 0 „	4	4	10	9	15	1	
91	Scott, J. J.	Lifter	9	1	0 10 0 „	8	5	0	7	8	7	
92	Eimerick, C. D.	Train-examiner	9	1	0 10 0 „	7	7	0	8	8	0	
93	Burridge, C. H.	„	9	1	0 10 0 „	3	0	6	11	9	11	
94	East, L.	„	9	1	0 10 0 „	3	0	6	10	9	10	
95	McKitterick, E.	Train-examiner (in charge of oil-engine)	9	1	0 10 0 „	3	0	6	10	9	10	
96	McBryde, J.	Train-examiner	9	1	0 10 0 „	3	0	6	9	9	9	
97	Jackson, P. T.	„	9	1	0 10 0 „	3	0	6	8	9	8	
98	Radford, J. T.	Lifter	9	1	0 10 0 „	3	0	6	8	9	8	
99	Brookes, T. W. H.	„	9	1	0 10 0 „	3	0	6	8	9	8	
100	Muirhead, A. J.	„	9	1	0 10 0 „	3	0	6	8	9	8	
101	Earley, W.	„	9	1	0 10 0 „	3	0	6	7	9	7	
102	Bramley, H. J.	„	9	1	0 10 0 „	3	0	6	3	9	3	
103	Walker, T.	„	9	1	0 10 0 „	4	4	4	4	8	8	
104	Bice, J.	„	9	1	0 10 0 „	9	9	0	5	10	2	
105	Kelly, J.	Train-examiner	9	1	0 10 0 „	2	0	7	1	9	1	
106	Clarke, J. M.	„	9	1	0 10 0 „	2	0	7	0	9	0	
107	Robertson, D. M.	„	9	1	0 10 0 „	2	0	6	10	8	10	
108	Gore, A. G.	„	9	1	0 10 0 „	2	0	6	8	8	8	
109	Taylor, E. E.	Lifter	9	1	0 10 0 „	2	0	6	7	8	7	
110	Hamilton, H.	Train-examiner	9	1	0 10 0 „	2	0	6	6	8	6	
111	Brass, C. P. H.	Lifter	9	1	0 10 0 „	2	0	6	6	8	6	
112	Soper, A. E.	„	9	1	0 10 0 „	2	0	6	0	8	0	
113	Hall, E. W.	Train-examiner	9	1	0 10 0 „	2	0	6	1	8	1	
114	Thomas, J.	Lifter	9	1	0 10 0 „	1	0	6	11	1	0	
115	Cox, H. T.	„	9	1	0 10 0 „	1	0	6	8	7	8	
116	Adams, H. N.	„	9	1	0 10 0 „	1	0	6	7	1	0	
117	Hughes, J.	Train-examiner	9	1	0 10 0 „	1	0	6	7	7	7	
118	Church, A. E.	„	9	1	0 10 0 „	1	0	6	5	7	5	
119	Hooker, L. N.	„	9	1	0 10 0 „	1	0	5	11	6	11	
120	Bisset, A.	Lifter	9	1	0 10 0 „	1	0	5	11	6	11	
121	O'Connor, J. F.	„	9	1	0 10 0 „	1	0	5	11	1	0	
122	Ronayne, F. H.	Train-examiner	9	1	0 10 0 „	1	0	5	10	1	0	
123	Papprill, F. H.	„	9	1	0 10 0 „	1	0	5	10	1	0	
124	Reynolds, G.	„	9	1	0 10 0 „	1	0	5	9	6	9	
125	Johnson, G.	„	9	1	0 10 0 „	1	0	5	7	1	0	
126	Read, H. F.	Lifter	9	1	0 10 0 „	1	0	5	7	6	7	
127	Huxtable, A. J.	„	9	1	0 10 0 „	1	0	5	5	1	0	
128	Rix, A. G.	Train-examiner (in charge of oil-engine)	9	1	0 10 0 „	1	day	6	0	..		
129	Creelman, E. S.	Train-examiner	9	1	0 10 0 „	1	„	6	10	..		
130	Beard, F.	Lifter	9	1	0 10 0 „	1	„	5	11	..		
131	Prime, G. W.	„	9	1	0 10 0 „	1	„	5	10	..		
132	Davenport, H. E.	Train-examiner	9	1	0 10 0 „	1	„	6	0	..		
133	Callagher, T. H.	„	9	1	0 10 0 „	1	„	5	9	..		
134	Hogan, J. J.	„	9	1	0 10 0 „	1	„	5	9	..		
135	Pomfrey, A. J.	Lifter	9	1	0 10 0 „	1	„	5	8	..		
136	Tute, W.	Train-examiner	9	1	0 10 0 „	1	„	5	4	..		
137	Tippens, J.	Lifter	9	1	0 10 0 „	1	„	5	6	..		
1	Power, J. J.	Train-examiner	9	2	0 9 6 „	1	0	5	10	6	8	
2	Prendergast, M.	„	9	2	0 9 6 „	1	0	5	8	1	0	
3	Hunter, J.	Lifter	9	2	0 9 6 „	11	0	8	11	15	9	
4	O'Neill, D.	„	9	2	0 9 6 „	11	0	3	4	14	4	
5	Leary, J. C.	Train-examiner	9	2	0 9 6 „	5	6	6	3	11	9	
6	Sayer, E. A.	„	9	2	0 9 6 „	2	0	10	2	9	1	
7	Olliver, L. A.	Lifter	9	2	0 9 6 „	5	4	..		5	4	
8	Henderson, J. C.	Train-examiner (in charge of steam-pump)	9	2	0 9 6 „	1	0	5	11	1	0	
9	O'Connor E.	Lifter	9	2	0 9 6 „	1	0	5	8	6	8	

RAILWAY DEPARTMENT CLASSIFICATION, 1913—*continued.*

SECOND DIVISION—*continued.*

Class 2: Locomotive—continued.

Prog. No.	Name	Classification.				Service			Remarks.
		Designation.	Subclass.	Grade.	Rate of Pay.	Since last appointed.	Prior to Date last appointed.	For Superannuation Purposes.	
					£ s. d.	Y. M.	Y. M.	Y. M.	
10	Corson, J. M.	Lifter	9	2	0 9 6 per diem	1 0	5 5	1 0	
11	Bright, H. W. ..	Train-examiner ..	9	2	0 9 6 „	1 0	5 5	1 0	
12	Smith, W. A.	„ ..	9	2	0 9 6 „	1 0	5 3	1 0	
13	McQuinn, W... ..	Lifter	9	2	0 9 6 „	1 0	5 3	6 3	
14	Florey, V. C.	„	9	2	0 9 6 „	1 0	5 5	6 2	
15	Burgess, F.	„	9	2	0 9 6 „	1 day	5 11	..	
16	Wright, A. J.	Train-examiner ..	9	2	0 9 6 „	1 „	5 11	..	
17	Parker, J. G.	Lifter	9	2	0 9 6 „	1 „	5 11	..	
18	Hayes, T.	Train-examiner ..	9	2	0 9 6 „	1 „	5 11	..	
19	Cockburn, A. B. ..	Lifter	9	2	0 9 6 „	1 „	5 10	..	
20	Gavin, J. V.	Train-examiner ..	9	2	0 9 6 „	1 „	5 9	..	
21	Monaghan, G. ..	„ ..	9	2	0 9 6 „	1 „	5 8	..	
22	McDonald, L. E. ..	Lifter	9	2	0 9 6 „	1 „	5 8	..	
23	Welsh, A.	Train-examiner (in charge of oil-engine)	9	2	0 9 6 „	1 „	5 4	..	
24	Doyle, J.	Train-examiner ..	9	2	0 9 6 „	1 „	5 3	..	
25	Haggerty, G.	Lifter	9	2	0 9 6 „	1 „	5 2	..	
26	Sheffield, W. H. ..	„	9	2	0 9 6 „	1 „	5 8	..	
27	Strong, P. A.	„	9	2	0 9 6 „	1 „	5 4	..	
28	Hogarth, J. Y. ..	„	9	2	0 9 6 „	1 „	5 4	..	
29	Smith, F. W... ..	„	9	2	0 9 6 „	1 „	5 2	..	
30	Brown, N.	„	9	2	0 9 6 „	1 „	5 2	..	
1	Pickens, J. J... ..	In charge of steam-pump	9	..	0 10 0 „	15 8	2 2	15 8	
2	Whitburn, C.	„	9	..	0 10 0 „	11 0	4 6	14 8	
3	Bradburn, E. L. ..	„	9	..	0 10 0 „	10 7	0 9	11 4	
4	Keat, J. E.	„	9	..	0 10 0 „	3 0	17 2	9 8	
1	Hamilton, A... ..	Watchman	9	..	2 8 0 per week	10 0	5 6	15 6	
2	Dooley, E. J.	„	9	..	2 8 0 „	3 11	0 8	4 5	
3	Carey, T.	„	9	..	2 8 0 „	26 10	..	26 10	
4	Linehan, J.	„	9	..	2 8 0 „	24 7	..	24 7	
5	Brennan, J.	„	9	..	2 8 0 „	29 2	..	29 2	

Class 3: Maintenance.

Prog. No.	Name	Designation.	Subclass.	Grade.	Rate of Pay.	Since last appointed.	Prior to Date last appointed.	For Superannuation Purposes.	Remarks.
1	Walker, J.	Leading Mason ..	1	..	0 13 6 per diem	23 0	8 0	23 0	
1	Crawford, R.	Leading Blacksmith ..	2	1	0 13 6 „	28 0	..	28 0	
2	Jory, G.	„ ..	2	1	0 13 6 „	35 5	..	35 5	
3	Bennett, A. J. ..	„ ..	2	1	0 13 6 „	29 8	1 9	29 8	
4	Pritchard, M... ..	„ ..	2	1	0 13 6 „	26 3	..	26 3	
5	Scrimgeour, D. ..	„ ..	2	1	0 13 6 „	8 10	0 11	9 7	
6	Helm, A. W.	„ ..	2	1	0 13 6 „	14 4	0 6	14 8	
1	Lewthwaite, J. J. ..	Leading Fitter (signal) ..	2	1	0 13 0 „	7 2	4 2	11 4	
1	Thompson, F... ..	Leading Carpenter ..	2	1	0 13 6 „	27 3	..	27 3	
2	Burnett, K.	„ ..	2	1	0 13 6 „	20 4	0 11	21 2	
3	Eccles, R.	„ ..	2	1	0 13 6 „	31 6	..	31 6	
4	Cooper, J.	„ ..	2	1	0 13 6 „	30 4	..	30 4	
5	Blanch, J.	„ ..	2	1	0 13 6 „	14 5	6 4	14 5	
6	Orange, W.	„ ..	2	1	0 13 6 „	23 8	..	23 8	
7	Shardlow, J. R. ..	„ ..	2	1	0 13 6 „	17 5	1 8	18 4	
8	Smith, G. H.	„ ..	2	1	0 13 6 „	15 8	2 7	17 4	
9	Lysaght, E.	„ ..	2	1	0 13 6 „	37 9	..	37 9	
10	Dashwood, J. H. ..	„ ..	2	1	0 13 6 „	21 9	..	21 9	
11	Alexander, J.	„ ..	2	1	0 13 6 „	31 4	..	31 4	
12	McKay, J.	„ ..	2	1	0 13 6 „	22 1	11 10	22 1	
13	Morgon, A.	„ ..	2	1	0 13 6 „	17 11	0 8	18 7	
14	Rodgers, E. J. ..	„ ..	2	1	0 13 6 „	29 5	..	29 5	
15	Chapman, A.	„ ..	2	1	0 13 6 „	12 6	4 7	14 2	
16	Strong, G. .. .	„ ..	2	1	0 13 6 „	20 0	..	20 0	
17	Caldow, R. T.	„ ..	2	1	0 13 6 „	16 6	10 1	19 10	
18	Chisholm, W... ..	„ ..	2	1	0 13 6 „	25 7	..	25 7	
19	De Thierry, G. H. ..	„ ..	2	1	0 13 6 „	27 7	..	27 7	
20	Hopkirk, R. A. ..	„ ..	2	1	0 13 6 „	22 6	0 1	22 6	
21	Rogers, A.	„ ..	2	1	0 13 6 „	10 2	2 11	12 11	
22	Russell, J. S.	„ ..	2	1	0 13 6 „	17 6	2 3	17 6	
23	Miller, P. R.	„ ..	2	1	0 13 6 „	4 4	7 4	11 8	
24	Barrett, G. H. ..	„ ..	2	1	0 13 6 „	9 9	2 10	12 6	
25	McChesney, J. F. ..	„ ..	2	1	0 13 6 „	11 8	6 0	17 8	
26	Hamilton, W. ..	„ ..	2	1	0 13 6 „	12 7	1 0	13 7	
27	Martin, H. A. S. ..	„ ..	2	1	0 13 6 „	8 2	2 1	10 3	
28	Rowse, A. E.	„ ..	2	1	0 13 6 „	8 1	0 2	8 3	
29	Nelson, H. F.	..	2	1	0 13 6 „	22 4	8 9	31 0	

RAILWAY DEPARTMENT CLASSIFICATION, 1913—*continued.*

SECOND DIVISION—*continued.*

Class 3: Maintenance—continued.

Prog. No.	Name.	Classification.				Service			Remarks.
		Designation.	Subclass.	Grade.	Rate of Pay.	Since last appointed.	Prior to Date last appointed.	For Superannuation Purposes.	
					£ s. d.	Y. M.	Y. M.	Y. M.	
30	Webber, F.	Leading Carpenter	2	1	0 13 6 per diem	8 7	0 7	9 2	
31	Forster, F. L.	〃	2	1	0 13 6 〃	7 6	0 5	7 11	
32	Meaney, J.	〃	2	1	0 13 6 〃	12 8	2 11	15 7	
33	Harvey, F.	〃	2	1	0 13 0 〃	8 2	0 4	8 5	
34	Stead, A. C.	〃	2	1	0 13 6 〃	6 2	1 5	7 6	
35	Peek, B. C.	〃	2	1	0 13 0 〃	8 10	4 8	9 3	
36	Mahony, J.	〃	2	1	0 13 0 〃	16 5	..	16 5	
37	McIvor, J. F.	〃	2	1	0 13 0 〃	7 7	0 7	8 2	
38	Bowden, J.	〃	2	1	0 13 0 〃	16 0	2 9	17 0	
39	O'Connor, D.	〃	2	1	0 13 0 〃	21 2	0 7	21 4	
1	McKenzie, M.	〃	2	2	0 12 6 〃	8 6	4 2	12 8	
2	Mather, W. J.	〃	2	2	0 12 6 〃	13 4	..	13 4	
3	Cook, H. J.	〃	2	2	0 12 6 〃	12 4	..	12 4	
1	Keig, W.	Leading Painter	3	2	0 12 0 〃	25 10	..	25 10	
2	Boyd, C.	〃	3	2	0 12 0 〃	21 9	..	21 9	
3	Cook, W.	〃	3	2	0 12 0 〃	29 6	..	29 6	
4	Holmes, C. E.	〃	3	2	0 12 0 〃	16 6	0 8	17 2	
5	Wiley, J. S.	〃	3	2	0 12 0 〃	12 1	0 7	12 8	
1	Ritchie, T.	Leading Plumber	3	2	0 12 0 〃	29 8	..	29 8	
2	Robertson, T.	〃	3	2	0 12 0 〃	21 3	7 8	21 3	
3	Maher, G. L.	〃	3	2	0 12 0 〃	11 8	10 1	21 9	
4	Crisp, A. B.	〃	3	2	0 12 0 〃	25 10	..	25 10	
5	Egan, M.	〃	3	2	0 12 0 〃	27 3	..	27 3	
1	Kelly, G.	Mason	4	1	0 12 0 〃	18 9	1 8	20 5	
2	Rush, P. C.	〃	4	1	0 12 0 〃	4 4	6 5	10 9	
3	Mackay, J.	〃	4	1	0 12 0 〃	7 3	1 1	8 4	
1	Hitchings, R. J.	Bricklayer	4	1	0 12 0 〃	7 7	0 4	7 11	
2	Wilson, F. G.	〃	4	1	0 12 0 〃	4 4	0 8	5 0	
3	Jefferies, J.	〃	4	1	0 12 0 〃	17 10	..	17 10	
1	Hepburn, G.	Fitter	5	1	0 11 6 〃	35 8	..	35 8	
2	Grosvenor, B.	〃	5	1	0 11 6 〃	25 3	..	25 3	
3	Everex, A. G.	〃	5	1	0 11 6 〃	12 0	2 5	13 5	
4	Davys, F. C.	〃	5	1	0 11 6 〃	7 11	1 3	9 2	
5	Lee, E. A.	〃	5	1	0 11 6 〃	9 2	1 1	10 3	
6	Gilmour, D. T.	〃	5	1	0 11 6 〃	5 9	1 0	6 9	
7	Watkinson, W.	〃	5	1	0 11 6 〃	5 6	1 5	6 11	
8	Ayto, J.	〃	5	1	0 11 6 〃	2 9	0 5	3 2	
9	Newsham, W. P.	〃	5	1	0 11 0 〃	0 3	0 9	0 3	
1	Frame, A.	Blacksmith	5	1	0 11 6 〃	36 0	..	36 0	
2	Miles, R.	〃	5	1	0 11 6 〃	33 3	..	33 3	
3	Wilson, J.	〃	5	1	0 11 6 〃	27 3	..	27 3	
4	Stewart, J. F.	〃	5	1	0 11 6 〃	25 10	0 6	25 10	
5	Hawken, E. R.	〃	5	1	0 11 6 〃	8 1	4 7	12 8	
6	Elder, J.	〃	5	1	0 11 6 〃	14 9	0 6	15 3	
7	Tizard, J. W.	〃	5	1	0 11 6 〃	7 4	9 6	14 8	
8	McDonald, A.	〃	5	1	0 11 6 〃	7 0	1 11	8 11	
9	Gordon, E. C.	〃	5	1	0 11 6 〃	6 9	0 8	6 9	
10	Robertson, J.	〃	5	1	0 11 6 〃	6 4	0 3	6 6	
11	Renz, R. F.	〃	5	1	0 11 6 〃	5 7	7 5	6 2	
12	Gollan, D.	〃	5	1	0 11 6 〃	5 1	1 6	6 7	
13	Holmes, E. W.	〃	5	1	0 11 6 〃	4 0	5 0	9 0	
14	Holmes, E. C.	〃	5	1	0 11 6 〃	5 5	..	5 5	
15	Stringer, F. W.	〃	5	1	0 11 6 〃	2 1	1 0	2 9	
16	Foster, W. C.	〃	5	1	0 11 6 〃	7 10	..	7 10	
17	Moore, J. P.	〃	5	1	0 11 6 〃	1 6	4 4	5 10	
18	Clark, G.	〃	5	1	0 11 0 〃	7 5	..	7 5	
1	McCarthy, J.	〃	5	2	0 10 0 〃	7 2	..	7 2	
2	Farland, C. T.	〃	5	2	0 10 0 〃	6 3	..	6 3	
1	Gordon, J.	Carpenter	5	1	0 11 6 〃	19 7	6 9	19 7	
2	Priestley, C.	〃	5	1	0 11 6 〃	18 11	0 9	18 11	
3	Saddler, W.	〃	5	1	0 11 6 〃	14 5	7 4	21 9	
4	Whitaker, D. H.	〃	5	1	0 11 6 〃	12 3	1 1	13 4	
5	Townsend, A.	〃	5	1	0 11 6 〃	34 0	..	34 0	
6	Caldow, R.	〃	5	1	0 11 6 〃	32 2	..	32 2	
7	Curtis, S.	〃	5	1	0 11 6 〃	23 0	4 3	27 3	
8	Mayne, S. W. A.	〃	5	1	0 11 6 〃	17 11	1 5	19 4	
9	Purdom, R.	〃	5	1	0 11 6 〃	29 6	..	29 6	
10	Spencer, H.	〃	5	1	0 11 6 〃	25 5	..	25 5	

RAILWAY DEPARTMENT CLASSIFICATION, 1913—*continued.*

SECOND DIVISION—*continued.*

Class 3: Maintenance—continued.

Prog. No.	Name.	Classification.				Service			Remarks.
		Designation.	Subclass.	Grade.	Rate of Pay.	Since last appointed.	Prior to Date last appointed.	For Superannuation Purposes.	
					£ s. d.	Y. M.	Y. M.	Y. M.	
11	Steven, M. P.	Carpenter	5	1	0 11 6 per diem	16 6	3 5	19 11	
12	Simonsen, A.	„	5	1	0 11 6 „	26 1	..	26 1	
13	Smith, H.	„	5	1	0 11 6 „	29 2	..	29 2	
14	Peek, J. W.	„	5	1	0 11 6 „	29 8	..	29 8	
15	Brown, J.	„	5	1	0 11 6 „	12 5	1 1	13 6	
16	Findlay, J.	„	5	1	0 11 6 „	11 11	2 8	14 6	
17	Baker, A.	„	5	1	0 11 6 „	18 0	2 2	20 2	
18	Mitchell, W. J.	„	5	1	0 11 6 „	9 0	7 8	15 10	
19	Kettles, J.	„	5	1	0 11 6 „	8 7	0 5	9 0	
20	Rowland, G.	„	5	1	0 11 6 „	8 6	0 2	8 8	
21	Green, F. H.	„	5	1	0 11 6 „	8 5	1 5	9 10	
22	Wisnesky, A.	„	5	1	0 11 6 „	8 0	7 9	15 4	
23	Reid, J. K.	„	5	1	0 11 6 „	7 7	3 3	9 0	
24	Milne, W.	„	5	1	0 11 6 „	29 4	..	29 4	
25	Johnstone, W. L.	„	5	1	0 11 6 „	9 3	1 4	10 7	
26	Rusbridge, R. W.	„	5	1	0 11 6 „	6 10	0 4	7 2	
27	Haigh, R. C.	„	5	1	0 11 6 „	8 6	0 4	8 10	
28	Davis, S. C.	„	5	1	0 11 6 „	13 2	..	13 2	
29	Pyne, R.	„	5	1	0 11 6 „	5 9	5 3	8 4	
30	Pidgeon, A.	„	5	1	0 11 6 „	5 8	2 3	7 11	
31	Burke, F.	„	5	1	0 11 6 „	5 2	1 7	6 9	
32	Moffat, J.	„	5	1	0 11 6 „	5 0	1 5	6 0	
33	White, L.	„	5	1	0 11 0 „	24 2	1 7	24 4	
34	Woolley, F. W.	„	5	1	0 11 6 „	4 8	2 7	7 3	
35	Davidson, J.	„	5	1	0 11 6 „	4 7	4 9	9 4	
36	Millar, R.	„	5	1	0 11 6 „	4 7	2 0	6 7	
37	Mann, A. G.	„	5	1	0 11 6 „	4 6	4 11	9 4	
38	Nelson, W.	„	5	1	0 11 6 „	4 4	2 4	6 8	
39	Symons, W. J.	„	5	1	0 11 6 „	4 4	5 6	9 10	
40	Smith, W. J.	„	5	1	0 11 6 „	4 4	4 8	9 0	
41	Johansen, J.	„	5	1	0 11 6 „	4 4	2 0	6 4	
42	Richardson, W. H.	„	5	1	0 11 6 „	4 4	4 8	9 0	
43	Dunlop, H.	„	5	1	0 11 6 „	4 4	2 1	6 5	
44	Hely, J. L. H.	„	5	1	0 11 6 „	4 2	1 8	5 10	
45	Blampied, J. T.	„	5	1	0 11 6 „	4 2	3 10	7 6	
46	Thompson, H. H.	„	5	1	0 11 6 „	4 1	1 8	5 3	
47	Hinchey, J.	„	5	1	0 11 6 „	3 11	2 2	5 1	
48	Cook, J. H.	„	5	1	0 11 6 „	3 7	2 0	5 7	
49	McLennan, G. W.	„	5	1	0 11 6 „	3 5	4 10	7 7	
50	Foster, E. J.	„	5	1	0 11 6 „	3 4	1 6	3 4	
51	McKee, A. W. G.	„	5	1	0 11 6 „	3 2	5 9	8 11	
52	Williams, E.	„	5	1	0 11 6 „	3 1	0 8	3 9	
53	Edwards, H. F.	„	5	1	0 11 6 „	3 1	3 6	3 9	
54	McMillan, L.	„	5	1	0 11 6 „	3 1	1 8	4 9	
55	Pelling, T. L.	„	5	1	0 11 0 „	15 6	2 11	15 6	
56	Lysaght, M.	„	5	1	0 11 6 „	6 1	0 6	6 7	
57	Hardcastle, G.	„	5	1	0 11 6 „	11 5	..	11 5	
58	Williams, E. R.	„	5	1	0 11 6 „	4 4	6 11	11 3	
59	McBride, W. F.	„	5	1	0 11 6 „	2 9	2 4	3 9	
60	Thomson, G. P.	„	5	1	0 11 6 „	2 6	8 9	11 2	
61	Treweek, A.	„	5	1	0 11 6 „	2 5	2 9	3 10	
62	Villers, W. J. C. S.	„	5	1	0 11 6 „	2 5	1 0	3 5	
63	Lower, L. N.	„	5	1	0 11 6 „	2 4	1 2	3 3	
64	Kench, S.	„	5	1	0 11 6 „	2 4	1 4	3 7	
65	Spicer, P. R.	„	5	1	0 11 6 „	2 1	2 1	4 2	
66	Selkirk, W.	„	5	1	0 11 6 „	2 0	4 2	6 2	
67	Munro, C.	„	5	1	0 11 6 „	2 0	1 5	3 5	
68	George, A. T.	„	5	1	0 11 6 „	1 11	6 4	8 3	
69	McLean, R.	„	5	1	0 11 6 „	1 11	2 4	3 7	
70	Campbell, H. D.	„	5	1	0 11 6 „	1 10	0 1	1 11	
71	Morrison, R. C.	„	5	1	0 11 6 „	1 10	2 10	4 8	
72	McIntosh, W. J.	„	5	1	0 11 6 „	1 9	3 10	4 4	
73	Ritchie, D. H.	„	5	1	0 11 6 „	1 9	1 5	3 2	
74	Toms, D. H.	„	5	1	0 11 6 „	1 8	0 11	2 7	
75	Pentecost, A. J.	„	5	1	0 11 6 „	1 7	6 9	2 5	
76	Cashmore, F. P.	„	5	1	0 11 6 „	1 6	4 0	5 6	
77	Miller, H. W.	„	5	1	0 11 6 „	1 6	0 5	1 11	
78	Williams, W. P.	„	5	1	0 11 6 „	1 2	1 5	1 6	
79	Hansen, J. G.	„	5	1	0 11 0 „	12 6	3 0	13 5	
80	Hunter, A. J.	„	5	1	0 11 6 „	1 0	..	1 0	
81	Carr, F. J.	„	5	1	0 11 6 „	0 11	1 0	1 11	
82	McMillan, R. C.	„	5	1	0 11 6 „	0 10	0 4	0 10	
83	Thurlow, R. H.	„	5	1	0 11 6 „	0 9	0 4	0 9	
84	Ross, J.	„	5	1	0 11 6 „	0 8	2 10	3 6	
85	Huggins, T. P.	„	5	1	0 11 6 „	0 5	1 4	0 5	
86	Robinson, H.	„	5	1	0 11 6 „	0 5	1 1	0 5	
87	Dalton, E.	„	5	1	0 11 6 „	0 4	1 3	0 4	

RAILWAY DEPARTMENT CLASSIFICATION, 1913—*continued.*

SECOND DIVISION—*continued.*

Class 3: Maintenance—continued.

Prog. No.	Name.	Classification.				Service			Remarks.
		Designation.	Subclass.	Grade.	Rate of Pay.	Since last appointed.	Prior to Date last appointed.	For Superannuation Purposes.	
					£ s. d.	Y. M.	Y. M.	Y. M.	
88	Hobbs, T. M.	Carpenter	5	1	0 10 6 per diem	7 9	..	7 9	
89	Blake, D. H.	„	5	1	0 10 6 „	7 1	..	7 1	
90	Birmingham, W.	„	5	1	0 10 6 „	7 0	..	7 0	
91	Fanning, A. H. N.	„	5	1	0 10 6 „	7 6	..	7 6	
92	Round, T. H.	„	5	1	0 10 6 „	7 0	..	7 0	
93	Horscroft, R. C.	„	5	1	0 10 6 „	7 2	..	7 2	
94	Hawkey, T.	„	5	1	0 10 6 „	7 1	..	7 1	
1	Brennan, P. J.	„	5	2	0 10 0 „	4 4	4 6	8 10	
2	Evans, S.	„	5	2	0 10 0 „	6 2	..	6 2	
3	McGill, A.	„	5	2	0 10 0 „	5 7	..	5 7	
1	Wishart, J.	Painter	5	1	0 11 6 „	24 4	..	24 4	
2	Mundy, J.	„	5	1	0 11 6 „	20 10	0 4	21 2	
3	Eaton, C. J.	„	5	1	0 11 6 „	17 0	1 3	17 9	
4	Elliot, C. B.	„	5	1	0 11 6 „	11 8	7 6	19 2	
5	Craies, W. D.	„	5	1	0 11 6 „	28 4	..	28 4	
6	Cuff, P. P.	„	5	1	0 11 6 „	17 0	1 8	17 2	
7	Feasey, H. H.	„	5	1	0 11 6 „	8 11	0 10	9 8	
8	Fletcher, T. W.	„	5	1	0 11 6 „	7 3	2 9	10 0	
9	Card, A. B.	„	5	1	0 11 6 „	24 9	..	24 9	
10	Brake, H. P.	„	5	1	0 11 6 „	6 0	5 9	7 10	
11	Peacock, G. A.	„	5	1	0 11 6 „	4 4	2 0	6 4	
12	Williamson, A.	„	5	1	0 11 6 „	23 4	..	23 4	
13	Brasier, G.	„	5	1	0 11 6 „	5 5	4 10	6 11	
14	Morris, H. W.	„	5	1	0 11 6 „	5 4	0 10	5 6	
15	Cole, W. A.	„	5	1	0 11 6 „	4 8	4 0	8 8	
16	Poppleton, G. P.	„	5	1	0 11 6 „	2 9	3 7	2 10	
17	O'Brien, W. J.	„	5	1	0 11 6 „	7 9	..	7 9	
18	Nelson, O. J.	„	5	1	0 11 6 „	2 3	2 4	4 7	
19	Smith, E.	„	5	1	0 11 0 „	2 1	3 9	3 2	
20	Butler, E.	„	5	1	0 11 0 „	2 0	1 1	3 1	
1	Mercer, R. M.	„	5	2	0 10 0 „	6 9	..	6 9	
2	Wren, T.	„	5	2	0 10 0 „	6 8	..	6 8	
3	Neave, G.	„	5	2	0 10 0 „	6 0	..	6 0	
1	McConnell, W.	Plumber	5	1	0 11 6 „	25 10	..	25 10	
2	Martin, D.	„	5	1	0 11 6 „	9 2	9 7	18 9	
3	Monk, E. T.	„	5	1	0 11 6 „	10 4	9 11	20 3	
4	Baker, T.	„	5	1	0 11 6 „	8 8	0 7	9 3	
5	Scott, A. A.	„	5	1	0 11 6 „	4 7	0 5	5 0	
6	Smallwood, S.	„	5	1	0 11 6 „	2 2	0 9	2 11	
7	Smith, A. S.	„	5	1	0 11 6 „	5 2	1 8	6 10	
8	Ledsham, W. R.	„	5	1	0 11 6 „	4 11	3 8	7 4	
9	Pitman, A. R.	„	5	1	0 11 6 „	1 8	0 3	1 11	
10	Vallance, W. J. T.	„	5	1	0 11 6 „	1 2	0 2	1 2	
11	Hodge, F. C.	„	5	1	0 11 0 „	11 10	0 2	11 10	
12	Petherick, R. J.	„	5	1	0 11 6 „	0 8	0 11	1 7	
13	Patterson, R. W. J.	„	5	1	0 11 6 „	0 5	2 0	2 5	
14	Burton, T. H.	„	5	1	0 10 6 „	7 2	..	7 2	
1	Sutherland, F. N.	„	5	2	0 10 0 „	6 5	..	6 5	
2	Hollobon, E. J.	„	5	2	0 10 0 „	0 5	0 3	0 5	
1	Harrison, T. A.	Apprentice Carpenter	6	..	0 5 6 „	5 6	..	5 6	
2	Burnett, A.	„	6	..	0 5 6 „	5 3	..	5 3	
3	McLaren, E.	„	6	..	0 5 6 „	4 8	..	4 8	
4	Sparks, A. M.	„	6	..	0 3 0 „	3 0	..	3 0	
5	McMillan, J. A.	„	6	..	0 3 0 „	2 11	..	2 11	
6	Christie, W. C.	„	6	..	0 3 0 „	2 7	..	2 7	
7	Buckley, W. G.	„	6	..	0 3 0 „	2 1	..	2 1	
8	Pearson, W. J.	„	6	..	0 3 0 „	2 0	..	2 0	
9	Plumb, S. S.	„	6	..	0 2 6 „	1 11	..	1 11	
10	Tempest, E.	„	6	..	0 2 6 „	1 3	..	1 3	
11	Troon, H. W.	„	6	..	0 2 6 „	1 1	..	1 1	
1	Tatham, L. J.	Apprentice Plumber	6	..	0 5 6 „	4 4	1 6	5 10	
2	Wren, V.	„	6	..	0 5 6 „	4 2	..	4 2	
3	Todd, W.	„	6	..	0 4 0 „	3 5	0 2	3 7	
4	Askew, A. L.	„	6	..	0 3 0 „	2 0	..	2 0	
5	Blackmore, N. C.	„	6	..	0 2 0 „	0 8	..	0 8	
1	Gregory, S. B.	Bridgeman	7	..	0 10 0 „	11 7	0 2	11 9	
2	McMahon, F. J.	„	7	..	0 10 0 „	21 10	..	21 10	
3	Bowden, B. J.	„	7	..	0 10 0 „	14 10	0 10	15 2	
4	Bone, J.	„	7	..	0 10 0 „	14 9	1 2	..	

RAILWAY DEPARTMENT CLASSIFICATION, 1913—*continued.*

SECOND DIVISION—*continued.*

Class 3: Maintenance—continued.

Prog. No.	Name.	Classification.				Service			Remarks.
		Designation.	Subclass.	Grade.	Rate of Pay	Since last appointed.	Prior to Date last appointed.	For Superannuation Purposes.	
					£ s. d. per diem	Y. M.		Y. M.	
5	Tapp, F. H.	Bridgeman	7	..	0 10 0	16 4	0 1	16 4	
6	Tee, T. J.	"	7	..	0 10 0 "	13 3	0 10	14 1	
7	Gray, T.	"	7	..	0 10 0 "	13 1	1 2	14 3	
8	Rankin, J.	"	7	..	0 10 0 "	12 11	0 11	13 10	
9	Newling, W.	"	7	..	0 10 0 "	12 10	1 2	14 0	
10	Campbell, L.	"	7	..	0 10 0 "	12 9	2 2	14 9	
11	Franklin, J. R.	"	7	..	0 10 0 "	12 4	0 11	12 11	
12	Wood, N. A.	"	7	..	0 10 0 "	11 0	1 2	12 2	
13	Mayne, T. C.	"	7	..	0 10 0 "	10 0	0 4	10 4	
14	Stewart, W.	"	7	..	0 10 0 "	9 10	1 5	11 3	
15	Clemens, A. B.	"	7	..	0 10 0 "	9 9	1 4	11 1	
16	Beaumont, G.	"	7	..	0 10 0 "	9 5	1 3	10 8	
17	Roddick, J.	"	7	..	0 10 0 "	9 4	0 7	9 11	
18	Price, H. R.	"	7	..	0 10 0 "	8 11	5 8	14 7	
19	Humphreys, J.	"	7	..	0 10 0 "	8 11	0 8	9 7	
20	Trotter, R. J.	"	7	..	0 10 0 "	8 2	1 1	8 6	
21	Mason, W.	"	7	..	0 10 0 "	8 2	4 6	12 7	
22	Reeves, A.	"	7	..	0 10 0 "	7 7	0 9	8 2	
23	Pickering, R. H.	"	7	..	0 10 0 "	7 7	0 10	8 2	
24	Robinson, J.	"	7	..	0 10 0 "	7 7	0 10	8 4	
25	Bermingham, T.	"	7	..	0 10 0 "	7 4	1 8	9 0	
26	Morris, S. R.	"	7	..	0 10 0 "	7 4	0 5	7 9	
27	Shephard, A. J.	"	7	..	0 10 0 "	7 2	0 4	7 6	
28	Palmer, A. C.	"	7	..	0 10 0 "	6 11	0 11	7 10	
29	Ibbotson, T. E.	"	7	..	0 10 0 "	6 6	0 9	7 3	
30	Sisley, H. C.	"	7	..	0 10 0 "	4 8	0 6	5 2	
31	Stanley, F. W. A.	"	7	..	0 10 0 "	4 4	4 0	8 4	
32	Rees, H. R.	"	7	..	0 10 0 "	4 4	5 5	9 9	
33	Dodd, H.	"	7	..	0 10 0 "	8 9	3 7	12 4	
34	Hill, F. W.	"	7	..	0 10 0 "	8 9	1 7	10 3	
35	Armstrong, R. J.	"	7	..	0 10 0 "	8 8	1 3	9 2	
36	Trudgeon, J. J.	"	7	..	0 10 0 "	7 0	0 3	7 0	
37	Pickup, W.	"	7	..	0 10 0 "	6 9	0 9	6 11	
38	Hartley, E.	"	7	..	0 10 0 "	6 5	1 2	6 11	
39	Dellow, W. L.	"	7	..	0 10 0 "	5 11	4 1	6 5	
40	McDonald, C.	"	7	..	0 10 0 "	5 10	1 4	7 2	
41	Hughes, C.	"	7	..	0 10 0 "	5 8	1 4	7 0	
42	Newton, R. J.	"	7	..	0 10 0 "	5 4	2 1	7 5	
43	Cobb, H. J.	"	7	..	0 10 0 "	4 9	1 7	6 4	
44	Layther, W.	"	7	..	0 10 0 "	4 4	0 2	4 6	
45	Macer, J. O.	"	7	..	0 10 0 "	3 8	1 5	5 1	
46	Stark, J.	"	7	..	0 10 0 "	3 1	5 0	8 1	
47	Coleman, O.	"	7	..	0 10 0 "	2 10	2 3	5 1	
48	Thompson, J.	"	7	..	0 10 0 "	2 10	0 7	3 5	
49	Moss, B.	"	7	..	0 10 0 "	2 5	5 2	7 7	
50	Brown, W. E.	"	7	..	0 10 0 "	2 3	4 6	6 9	
51	Clarke, F. H.	"	7	..	0 10 0 "	2 1	4 7	6 8	
52	Gilroy, W.	"	7	..	0 10 0 "	2 1	3 10	5 11	
53	Finlayson, P.	"	7	..	0 10 0 "	2 0	5 11	7 0	
54	McCreanor, R.	"	7	..	0 10 0 "	2 0	0 5	2 5	
55	Thomas, W. J.	"	7	..	0 10 0 "	2 0	3 3	2 7	
56	Chapman, R. F.	"	7	..	0 10 0 "	1 11	6 4	8 3	
57	Wakeham, W. H. A.	"	7	..	0 10 0 "	1 11	7 1	7 7	
58	Dempsey, M.	"	7	..	0 10 0 "	1 9	3 6	5 3	
59	Golding, A. S.	"	7	..	0 10 0 "	1 9	3 7	5 4	
60	Woodbury, F. G.	"	7	..	0 10 0 "	1 8	1 6	1 10	
61	Norton, A.	"	7	..	0 10 0 "	1 7	0 7	2 2	
62	Teesdale, T. H.	"	7	..	0 10 0 "	1 5	5 7	6 2	
63	Minifie, A.	"	7	..	0 10 0 "	1 4	3 5	1 4	
64	Codyre, M. H.	"	7	..	0 10 0 "	0 10	6 3	4 11	
65	Olsen, A. E.	"	7	..	0 10 0 "	0 8	0 10	0 8	
66	Anderson, J. H. T.	"	7	..	0 10 0 "	0 7	1 6	0 7	
67	Henderson, W.	"	7	..	0 10 0 "	0 7	1 6	0 7	
68	Taylor, W. J.	"	7	..	0 10 0 "	6 days	1 3	0 8	
1	Townson, R. L.	Donkey-engine Driver	8	1	0 10 6 "	20 0	..	20 0	
2	Livingstone, J.	"	8	1	0 10 6 "	32 1	..	32 1	
3	Anderson, W.	"	8	1	0 10 6 "	22 8	..	22 8	
4	Ellis, J.	"	8	1	0 10 6 "	22 1	0 5	22 6	
5	Jamieson, H. M.	"	8	1	0 10 6 "	4 4	2 0	6 4	
6	Grace, T.	"	8	1	0 10 0 "	11 11	5 1	17 0	
7	Lisk, D.	"	8	1	0 10 0 "	20 0	0 3	20 0	
8	Gill, G.	"	8	1	0 10 6 "	10 11	2 5	13 4	
9	McDonald, N. H.	"	8	1	0 10 6 "	7 10	0 3	8 1	
10	Kilpatrick, C.	"	8	1	0 10 6 "	6 4	1 5	7 9	
11	Grieve, J.	"	8	1	0 10 0 "	5 10	1 5	6 11	
12	McDonald, H.	"	8	1	0 10 0 "	4 2	2 4	6 2	

Railway Department Classification, 1913—*continued.*

Prog. No.	Name.	Classification.				Service			Remarks
		Designation.	Subclass.	Grade.	Rate of Pay	Since last appointed.	Prior to Date last appointed.	For Superannuation Purposes.	
	SECOND DIVISION—*continued.*								
	Class 3: Maintenance—continued.								
					£ s. d.	Y. M.	Y. M.	Y. M.	
1	Keat, C.	Shop Engineman	8	1	0 10 6 per diem	15 11	1 2	16 11	
2	Nelson, A. B.	„	8	1	0 10 6 „	10 11	1 4	12 3	
3	Adams, J.	„	8	1	0 10 6 „	18 0	0 9	18 9	
1	Dowling, M. J.	Storeman	9	1	0 10 0 „	23 0	0 10	23 10	
2	Jennings, G. H.	„	9	1	0 10 0 „	19 1	..	19 1	
3	Brailsford, J. J.	„	9	1	0 10 0 „	10 0	2 3	12 3	
1	Cooper, J. H.	„	9	2	0 9 6 „	4 4	5 11	10 3	
2	Duke, G.	„	9	2	0 9 6 „	17 11	1 4	19 3	
3	Dillicar, J. H.	„	9	2	0 9 6 „	14 10	1 7	15 9	
4	Curran, J.	„	9	2	0 9 6 „	21 9	..	21 9	
5	Giles, W. A.	„	9	2	0 9 6 „	14 6	0 5	14 8	
6	Trask, T.	„	9	2	0 9 6 „	13 3	0 5	13 6	
7	McLauchlan, H.	„	9	2	0 9 6 „	10 5	0 10	..	
8	Moore, J.	„	9	2	0 9 6 „	8 9	1 0	9 2	
9	Potter, S.	„	9	2	0 9 6 „	8 5	0 1	8 6	
10	Ward, F.	„	9	2	0 9 6 „	7 11	0 5	8 3	
11	Trudgeon, T.	„	9	2	0 9 6 „	9 4	..	9 4	
12	Duignan, T.	„	9	2	0 9 6 „	9 2	0 4	9 6	
13	Bain, W. G.	„	9	2	0 9 6 „	4 7	1 0	5 7	
14	Smales, G.	„	9	2	0 9 6 „	4 4	1 3	5 7	
15	Murray, J.	„	9	2	0 9 6 „	3 3	..	3 3	
16	Chesterman, E. W.	„	9	2	0 9 6 „	1 10	11 9	12 7	
1	McNeely, J.	Striker	9	1	0 10 0 „	11 0	4 10	15 9	
2	Biano, R.	„	9	1	0 10 0 „	18 1	1 7	18 1	
3	Spooner, F.	„	9	1	0 10 0 „	26 10	..	26 10	
4	Rogers, R. T. W. L.	„	9	1	0 10 0 „	26 11	..	26 11	
5	Rogers, S.	„	9	1	0 10 0 „	27 7	..	27 7	
6	Brown, W. J.	„	9	1	0 10 0 „	22 7	..	22 7	
7	Fee, F.	„	9	1	0 10 0 „	19 0	0 6	19 6	
8	Williamson, R.	„	9	1	0 10 0 „	19 9	..	19 9	
9	White, W.	„	9	1	0 10 0 „	18 3	1 2	18 10	
10	Sloan, H.	„	9	1	0 10 0 „	18 0	1 7	19 7	
11	Secord, R.	„	9	1	0 10 0 „	15 7	0 6	16 1	
12	Wood, A.	„	9	1	0 10 0 „	22 3	..	22 3	
13	Smith, E.	„	9	1	0 10 0 „	14 10	3 4	17 5	
14	Natta, J. J.	„	9	1	0 10 0 „	13 8	1 1	14 2	
15	Ander, A. E.	„	9	1	0 10 0 „	10 11	1 0	11 11	
16	Woodhouse, G.	„	9	1	0 10 0 „	19 0	1 1	20 1	
17	Paddy, C.	„	9	1	0 10 0 „	8 11	2 3	10 6	
18	Bennet, A.	„	9	1	0 10 0 „	11 0	2 3	13 3	
19	Fraser, F. J.	„	9	1	0 10 0 „	8 7	2 0	10 7	
1	Merry, R. H.	„	9	2	0 9 6 „	8 7	0 7	8 11	
2	Max, J.	„	9	2	0 9 6 „	4 4	8 6	12 10	
3	Flynn, D.	„	9	2	0 9 6 „	19 5	..	19 5	
1	McLoon, J.	Skilled Labourer	9	..	0 9 6 „	22 1	8 4	30 5	
2	Dunnill, J.	„	9	..	0 9 6 „	12 11	2 2	14 10	
3	Fitzgerald, M.	„	9	..	0 9 6 „	35 4	..	35 4	
4	Duncan, A.	„	9	..	0 9 6 „	27 11	..	27 11	
5	Mahony, T.	„	9	..	0 9 6 „	25 0	..	25 0	
6	Cummings, P.	„	9	..	0 9 6 „	32 0	..	32 0	
7	Bailey, R.	„	9	..	0 9 6 „	20 6	1 0	21 4	
8	Haddock, W. D.	„	9	..	0 9 6 „	11 0	6 8	11 0	
9	Knuckey, J.	„	9	..	0 9 6 „	14 5	4 8	17 6	
10	Hickey, J.	„	9	..	0 9 6 „	27 9	..	27 9	
11	Davison, J. A.	„	9	..	0 9 6 „	16 9	5 4	21 8	
12	Nelson, W.	„	9	..	0 9 6 „	22 5	3 9	24 4	
13	Otten, J. W.	„	9	..	0 9 6 „	14 11	0 4	15 3	
14	Smith, J.	„	9	..	0 9 6 „	7 6	5 4	12 10	
15	Moore, W.	„	9	..	0 9 6 „	18 0	1 4	19 0	
16	Flynn, D.	„	9	..	0 9 6 „	19 0	0 10	19 9	
17	Hinton, A. B.	„	9	..	0 9 6 „	19 11	..	19 11	
18	Kyle, J.	„	9	..	0 9 6 „	31 3	..	31 3	
19	Troon, W. H.	„	9	..	0 9 6 „	12 2	0 3	12 5	
20	McDougall, R.	„	9	..	0 9 6 „	11 2	4 1	15 3	
21	Turner, G. E.	„	9	..	0 9 6 „	7 8	1 2	8 6	
22	Blundell, H. T.	„	9	..	0 9 6 „	5 4	1 7	6 11	
23	Stanton, J.	„	9	..	0 9 6 „	5 3	4 10	7 1	
24	Henderson, D.	„	9	..	0 9 6 „	7 11	1 1	9 0	
25	McKenzie, R.	„	9	..	0 9 6 „	1 7	0 2	1 9	
26	McFarlane, J.	„	9	..	0 9 6 „	1 11	4 1	5 10	
27	Mills, G.	„	9	..	0 9 6 „	23 9	..	23 9	

RAILWAY DEPARTMENT CLASSIFICATION, 1913—*continued*.

SECOND DIVISION—*continued*.

Class 3: Maintenance—continued.

Prog. No.	Name.	Classification.				Service			Remarks.
		Designation.	Subclass.	Grade.	Rate of Pay	Since last appointed.	Prior to Date last appointed.	For Superannuation Purposes.	
					£ s. d.	Y. M.	Y. M.	Y. M.	
1	Pigott, W. H.	Ganger	10	..	0 11 0 per diem	38 7	..	38 7	
2	Knighton, R.	〃	10	..	0 11 0 〃	22 4	4 7	26 11	
3	Phillips, J.	〃	10	..	0 11 0 〃	32 11	..	32 11	
4	Smith, W.	〃	10	..	0 11 0 〃	22 0	9 1	31 1	
5	Manners, T.	〃	10	..	0 11 0 〃	17 10	..	17 10	
6	Railton, A.	〃	10	..	0 11 0 〃	35 3	..	35 3	
7	Mortimer, T.	〃	10	..	0 11 0 〃	23 6	0 11	23 6	
8	McGrath, C.	〃	10	..	0 11 0 〃	27 0	..	27 0	
9	Roach, J.	〃	10	..	0 11 0 〃	23 1	..	23 1	
10	Bourke, J.	〃	10	..	0 11 0 〃	35 5	..	35 5	
11	Ash, J.	〃	10	..	0 11 0 〃	18 9	2 0	19 5	
12	McInteer, W.	〃	10	..	0 11 0 〃	22 2	..	22 2	
13	Kilmister, R.	〃	10	..	0 11 0 〃	31 0	..	31 0	
14	Baxter, T.	〃	10	..	0 11 0 〃	17 10	..	17 10	
15	Vance, J.	〃	10	..	0 11 0 〃	29 6	1 3	30 9	
16	Hore, J.	〃	10	..	0 11 0 〃	4 4	2 5	6 9	
17	Sellars, S.	〃	10	..	0 11 0 〃	30 5	..	30 5	
18	Tull, D.	〃	10	..	0 11 0 〃	25 3	..	25 3	
19	Pauling, J.	〃	10	..	0 11 0 〃	22 6	..	22 6	
20	Hailwood, C.	〃	10	..	0 11 0 〃	19 11	2 10	20 0	
21	Williams, C. E. ..	〃	10	..	0 11 0 〃	19 10	0 5	20 3	
22	Wellington, F. ..	〃	10	..	0 11 0 〃	24 5	..	24 5	
23	Clutterbuck, A. E. ..	〃	10	..	0 11 0 〃	24 9	..	24 9	
24	Lawson, P.	〃	10	..	0 11 0 〃	25 11	..	25 11	
25	Lundy, J.	〃	10		0 11 0 〃	24 8	..	24 8	
26	Scott, F.	〃	10	..	0 11 0 〃	29 6	..	29 6	
27	Carr, M. J.	〃	10	..	0 11 0 〃	23 0	..	23 0	
28	Elliott, T.	〃	10	..	0 11 0 〃	23 5	..	23 5	
29	Eggelton, F. H. ..	〃	10	..	0 11 0 〃	24 9	..	24 9	
30	Corkin, M.	〃	10	..	0 11 0 〃	24 2	..	24 2	
31	Fraser, L.	〃	10	..	0 11 0 〃	22 11	..	22 11	
32	Gillespie, H.	〃	10	..	0 11 0 〃	22 10	..	22 10	
1	Elliott, W. J.	〃	11	1	0 10 6 〃	19 11	1 6	21 5	
2	Cassey, W.	〃	11	1	0 10 6 〃	26 11	..	26 11	
3	Kugener, P.	〃	11	1	0 10 6 〃	33 2	..	33 2	
4	Tyack, J.	〃	11	1	0 10 6 〃	36 7	..	36 7	
5	Lucas, G.	〃	11	1	0 10 6 〃	28 6	..	28 6	
6	Day, P.	〃	11	1	0 10 6 〃	34 3	..	34 3	
7	Hanna, J.	〃	11	1	0 10 6 〃	37 6	..	37 6	
8	O'Hara, J.	〃	11	1	0 10 6 〃	30 10	..	30 10	
9	Beaton, J.	〃	11	1	0 10 6 〃	26 4	0 1	26 5	
10	Wallace, D.	〃	11	1	0 10 6 〃	32 2	..	32 2	
11	Montgomery, J. ..	〃	11	1	0 10 6 〃	31 10	3 5	31 10	
12	Sandford, C.	〃	11	1	0 10 6 〃	29 0	..	29 0	
13	Stancombe, D. ..	〃	11	1	0 10 6 〃	30 8	..	30 8	
14	Garland, T.	〃	11	1	0 10 6 〃	29 8	0 3	29 11	
15	Farr, J.	〃	11	1	0 10 6 〃	34 2	..	34 2	
16	Muir, J. W.	〃	11	1	0 10 6 〃	26 11	6 2	33 1	
17	McCrory, P.	〃	11	1	0 10 6 〃	30 6	..	30 6	
18	Knowles, T.	〃	11	1	0 10 6 〃	27 2	..	27 2	
19	Dennehy, W.	〃	11	1	0 10 6 〃	33 10	..	33 10	
20	Scully, M.	〃	11	1	0 10 6 〃	31 8	0 5	32 1	
21	Grant, J.	〃	11	1	0 10 6 〃	27 3	1 6	28 9	
22	Lawry, J.	〃	11	1	0 10 6 〃	30 9	0 8	31 5	
23	Cunningham, T. R. ..	〃	11	1	0 10 6 〃	27 2	..	27 2	
24	Sweeney, J.	〃	11	1	0 10 6 〃	26 10	..	26 10	
25	Barlow, J. T.	〃	11	1	0 10 6 〃	25 1	..	25 1	
26	Hubbard, T.	〃	11	1	0 10 6 〃	25 4	..	25 4	
27	Neal, J.	〃	11	1	0 10 6 〃	22 10	0 5	23 3	
28	Gordon, W. A. ..	〃	11	1	0 10 6 〃	23 0	..	23 0	
29	McLeod, G.	〃	11	1	0 10 6 〃	22 9	..	22 9	
30	Robb, D. A.	〃	11	1	0 10 6 〃	18 0	1 11	19 11	
31	Stanley, W. S. ..	〃	11	1	0 10 6 〃	18 0	1 7	19 7	
32	Hood, J.	〃	11	1	0 10 6 〃	18 0	0 4	18 4	
33	Rush, C.	〃	11	1	0 10 6 〃	21 0	..	21 0	
34	Warren, A.	〃	11	1	0 10 6 〃	17 6	1 4	17 6	
35	Gordon, J.	〃	11	1	0 10 6 〃	20 7	..	20 7	
36	Lonie, D.	〃	11	1	0 10 6 〃	17 0	..	17 0	
37	Stevenson, L.	〃	11	1	0 10 6 〃	29 0	..	29 0	
38	Streeter, G.	〃	11	1	0 10 6 〃	19 10	1 1	20 11	
39	Scanlan, J. T. ..	〃	11	1	0 10 6 〃	19 1	..	19 1	
40	Lowry, J.	〃	11	1	0 10 6 〃	19 10	2 3	22 1	
41	Gordon, J.	〃	11	1	0 10 6 〃	17 11	0 1	18 0	
42	Coyle, M.	〃	11	1	0 10 6 〃	17 4	1 2	18 6	
43	Barnett, R.	〃	11	1	0 10 6 〃	10 11	5 6	15 4	
44	Nelson, D.	〃	11	1	0 10 6 〃	21 10	..	21 10	

RAILWAY DEPARTMENT CLASSIFICATION, 1913—*continued.*

SECOND DIVISION—*continued.*

Class 3: Maintenance—continued.

Prog. No.	Name.	Classification.				Service			Remarks.
		Designation.	Subclass.	Grade.	Rate of Pay	Since last appointed.	Prior to Date last appointed.	For Superannuation Purposes.	
					£ s. d.	Y. M.	Y. M.	Y. M.	
45	Robertson, W.	Ganger	11	1	0 10 6 per diem	19 0	..	19 0	
46	Nolan, E. W.	„	11	1	0 10 6 „	17 7	..	17 7	
47	Wilkinson, G.	„	11	1	0 10 6 „	16 5	2 9	19 2	
48	Macken, C. A.	„	11	1	0 10 6 „	16 5	1 6	17 11	
49	Cleverley, H.	„	11	1	0 10 6 „	21 4	..	21 4	
50	Heydon, A. T.	„	11	1	0 10 6 „	21 8	..	21 8	
51	Hoffmann, F. A. G.	„	11	1	0 10 6 „	18 9	..	18 9	
52	Spooner, J. M.	„	11	1	0 10 6 „	15 9	..	15 9	
53	Wright, T.	„	11	1	0 10 6 „	15 9	..	15 9	
54	Rusden, W. R.	„	11	1	0 10 6 „	15 7	..	15 7	
55	Gupwell, W. I.	„	11	1	0 10 6 „	19 7	..	19 7	
56	Patterson, E. J.	„	11	1	0 10 6 „	15 5	0 7	15 11	
57	Hancox, J. C.	„	11	1	0 10 6 „	20 5	..	20 5	
58	McMillan, T.	„	11	1	0 10 6 „	17 10	..	17 10	
59	Abbott, E. J.	„	11	1	0 10 6 „	16 8	..	16 8	
60	McDonald, G.	„	11	1	0 10 6 „	4 4	3 11	8 3	
61	Luff, T.	„	11	1	0 10 6 „	4 4	5 2	9 6	
62	Blacker, J.	„	11	1	0 10 6 „	4 4	3 11	8 3	
63	Giles, W. H. F.	„	11	1	0 10 6 „	4 4	19 11	24 3	
64	Henderson, T.	„	11	1	0 10 6 „	36 1	..	36 1	
65	Stringer, F.	„	11	1	0 10 6 „	36 2	..	36 2	
66	King, E.	„	11	1	0 10 6 „	35 4	..	35 4	
67	Fitzpatrick, T.	„	11	1	0 10 6 „	27 11	..	27 11	
68	Davis, T. S.	„	11	1	0 10 6 „	28 5	..	28 5	
69	Hill, E.	„	11	1	0 10 6 „	24 11	1 11	26 10	
70	Anstis, W. J.	„	11	1	0 10 6 „	23 1	1 5	24 6	
71	Clarke, T.	„	11	1	0 10 6 „	24 10	..	24 10	
72	Lenihan, M.	„	11	1	0 10 6 „	31 1	0 1	31 2	
73	Gosden, G.	„	11	1	0 10 6 „	34 7	..	34 7	
74	Panting, J.	„	11	1	0 10 6 „	30 9	..	30 9	
75	Davies, J.	„	11	1	0 10 6 „	27 5	..	27 5	
76	Kyle, J.	„	11	1	0 10 6 „	27 7	..	27 7	
77	Hanna, R.	„	11	1	0 10 6 „	25 8	..	25 8	
78	Cooney, M.	„	11	1	0 10 6 „	19 11	2 7	22 6	
79	Cassey, S.	„	11	1	0 10 6 „	19 4	..	19 4	
80	McDonald, A. F.	„	11	1	0 10 6 „	27 5	..	27 5	
81	Dobson, C.	„	11	1	0 10 6 „	18 6	0 9	19 3	
82	Cooper, R. J.	„	11	1	0 10 6 „	16 10	1 2	16 10	
83	Gillespie, G.	„	11	1	0 10 6 „	32 2	..	32 2	
84	Norman, E. T.	„	11	1	0 10 6 „	27 1	..	..	
85	Sullivan, M.	„	11	1	0 10 6 „	24 11	..	24 11	
86	McWha, D. M.	„	11	1	0 10 6 „	10 11	4 2	15 0	
87	Butcher, D.	„	11	1	0 10 6 „	27 2	..	27 2	
88	Rusbatch, R.	„	11	1	0 10 6 „	23 11	..	23 11	
89	Long, J. G.	„	11	1	0 10 6 „	28 5	..	28 5	
90	Diamond, B.	„	11	1	0 10 6 „	23 4	0 4	23 11	
91	Fisher, A.	„	11	1	0 10 6 „	24 4	..	24 4	
92	Daly, B.	„	11	1	0 10 6 „	21 7	..	21 7	
93	Dennehy, J.	„	11	1	0 10 6 „	17 2	0 10	18 0	
94	Amoore, A. F. E.	„	11	1	0 10 6 „	20 8	..	20 8	
95	Thompson, W. J.	„	11	1	0 10 6 „	15 8	0 6	16 2	
96	Coggins, W.	„	11	1	0 10 6 „	15 8	4 0	15 8	
97	Thomas, J. H.	„	11	1	0 10 6 „	15 7	0 6	15 9	
98	Addison, D. W.	„	11	1	0 10 6 „	19 3	..	19 3	
99	Belesky, T. A.	„	11	1	0 10 6 „	20 9	..	20 9	
100	Pearce, G.	„	11	1	0 10 6 „	21 3	..	21 3	
101	Green, A.	„	11	1	0 10 6 „	17 10	..	17 10	
102	Bird, W.	„	11	1	0 10 6 „	14 10	0 4	15 2	
103	McHugh, J.	„	11	1	0 10 6 „	14 9	0 1	14 10	
104	Munro, L.	„	11	1	0 10 6 „	14 8	0 7	15 3	
105	Cleverley, E. C.	„	11	1	0 10 6 „	14 6	0 10	15 4	
106	Currie, S.	„	11	1	0 10 6 „	14 6	..	14 6	
107	Wright, G. W.	„	11	1	0 10 6 „	21 4	..	21 4	
108	Goldsbury, F. E.	„	11	1	0 10 6 „	22 2	..	22 2	
109	Maher, P.	„	11	1	0 10 6 „	17 10	..	17 10	
110	Muirhead, J.	„	11	1	0 10 6 „	28 9	..	28 9	
111	Rusbatch, J.	„	11	1	0 10 6 „	21 10	..	21 10	
112	Peckham, R. D.	„	11	1	0 10 6 „	15 0	..	15 0	
113	Robertson, J. R.	„	11	1	0 10 6 „	14 6	1 3	15 0	
114	Morgan, T. G.	„	11	1	0 10 6 „	14 6	1 8	14 9	
115	Telfer, D. J.	„	11	1	0 10 6 „	14 5	0 7	14 7	
116	Lonie, G.	„	11	1	0 10 6 „	19 8	...	19 8	
117	McPherson, D. A. F.	„	11	1	0 10 6 „	14 4	1 2	15 0	
118	Lousley, F. J.	„	11	1	0 10 6 „	14 4	0 7	14 7	
119	Johnston, W.	„	11	1	0 10 6 „	14 4	0 3	14 4	
120	O'Connell, M.	„	11	1	0 10 6 „	14 3	0 4	14 6	
121	Smith, P.	„	11	1	0 10 6 „	14 3	0 3	14 5	

RAILWAY DEPARTMENT CLASSIFICATION, 1913—*continued.*

SECOND DIVISION—*continued.*

Class 3: Maintenance—continued.

Prog. No.	Name.	Classification.				Service			Remarks.
		Designation.	Subclass.	Grade.	Rate of Pay.	Since last appointed.	Prior to Date last appointed.	For Superannuation Purposes.	
					£ s. d.	Y. M.	Y. M.	Y. M.	
122	Crowe, A.	Ganger	11	1	0 10 6 per diem	14 2	0 2	14 3	
123	Stark, W. C.	"	11	1	0 10 6 "	21 1	..	21 1	
124	Henderson, M.	"	11	1	0 10 6 "	19 0	..	19 0	
125	Joyce, P.	"	11	1	0 10 6 "	13 11	0 7	13 11	
126	Middleton, J.	"	11	1	0 11 0 "	13 10	0 3	13 10	
127	Munro, W.	"	11	1	0 10 6 "	19 5	..	19 5	
128	Aylward, W.	"	11	1	0 10 6 "	23 10	..	23 10	
129	Wilson, G. H.	"	11	1	0 10 6 "	19 9	..	19 9	
130	Bartlett, J.	"	11	1	0 10 6 "	15 7	4 4	..	
131	Williams, J.	"	11	1	0 10 6 "	15 4	1 0	15 6	
132	Kilpatrick, J. T.	"	11	1	0 10 6 "	14 10	1 4	16 2	
133	Hanley, J. E.	"	11	1	0 10 6 "	14 8	1 4	16 0	
134	Austin, A.	"	11	1	0 10 6 "	13 11	0 11	13 11	
135	Burns, J.	"	11	1	0 10 6 "	13 10	0 7	14 3	
136	Hardy, T. M.	"	11	1	0 10 6 "	13 7	1 8	13 10	
137	Phelan, J. A.	"	11	1	0 10 6 "	18 6	..	18 6	
138	Moore, E. R.	"	11	1	0 10 6 "	13 4	0 9	14 1	
139	McCullough, J.	"	11	1	0 10 6 "	13 4	0 7	13 11	
140	Murdoch, A. J.	"	11	1	0 10 6 "	13 3	0 8	13 5	
141	Leathem, C. J.	"	11	1	0 10 6 "	19 5	..	19 5	
142	Cheeseman, O.	"	11	1	0 10 6 "	15 8	2 4	18 0	
1	Snell, S.	"	11	2	0 10 0 "	28 6	..	28 6	
2	Farrell, J. J.	"	11	2	0 10 0 "	25 7	..	25 7	
3	McLean, T.	"	11	2	0 10 0 "	17 10	..	17 10	
4	Wallace, J.	"	11	2	0 10 0 "	17 10	..	17 10	
5	Puttick, J. P.	"	11	2	0 10 0 "	29 2	..	29 2	
6	Derbidge, A.	"	11	2	0 10 0 "	38 3	..	38 3	
7	Horgan, C.	"	11	2	0 10 0 "	34 11	..	34 11	
8	Downey, M.	"	11	2	0 10 0 "	31 9	2 1	33 10	
9	Barnett, W.	"	11	2	0 10 0 "	29 6	0 4	29 10	
10	Tulley, A.	"	11	2	0 10 0 "	29 6	0 3	29 6	
11	Crisp, J. D.	"	11	2	0 10 0 "	26 1	1 6	27 7	
12	Lewis, J.	"	11	2	0 10 0 "	31 0	..	31 0	
13	Shepherd, S. S.	"	11	2	0 10 0 "	30 6	..	30 6	
14	Wilson, D. N.	"	11	2	0 10 0 "	19 4	..	19 4	
15	Sherman, S.	"	11	2	0 10 0 "	18 8	0 7	19 3	
16	Lilburne, F. J.	"	11	2	0 10 0 "	23 6	..	23 6	
17	Duncan, J.	"	11	2	0 10 0 "	18 3	1 1	18 7	
18	Garth, F.	"	11	2	0 10 0 "	18 1	0 9	18 10	
19	Millar, A.	"	11	2	0 10 0 "	23 4	..	23 4	
20	Bulman, A.	"	11	2	0 10 0 "	17 1	2 5	19 3	
21	Moodie, R.	"	11	2	0 10 0 "	15 9	..	15 9	
22	Bennett, W. J.	"	11	2	0 10 0 "	15 8	0 9	16 5	
23	McGowan, F.	"	11	2	0 10 0 "	14 11	..	14 11	
24	McCormick, P.	"	11	2	0 10 0 "	14 11	0 3	14 11	
25	Chapman, C. H.	"	11	2	0 10 0 "	14 10	0 3	14 11	
26	Baldwin, A. W.	"	11	2	0 10 0 "	19 0	2 4	19 9	
27	Carroll, C. T.	"	11	2	0 10 0 "	22 5	..	22 5	
28	Murch, W.	"	11	2	0 10 0 "	18 1	5 6	20 0	
29	Attrill, R. J.	"	11	2	0 10 0 "	16 11	..	16 11	
30	Davey, R.	"	11	2	0 10 0 "	27 7	2 3	29 10	
31	Strack, J. E.	"	11	2	0 10 0 "	14 8	5 4	20 0	
32	Hyde, W.	"	11	2	0 10 0 "	19 4	..	19 4	
33	Kelly, W. H.	"	11	2	0 10 0 "	24 9	..	24 9	
34	Tobeck, F.	"	11	2	0 10 0 "	13 10	0 1	13 11	
35	Jones, H. E.	"	11	2	0 10 0 "	18 9	..	18 9	
36	Bennett, J. E.	"	11	2	0 10 0 "	13 8	0 6	14 2	
37	Morrison, T.	"	11	2	0 10 0 "	13 4	0 1	13 5	
38	Huckstep, H. J.	"	11	2	0 10 0 "	16 0	1 9	16 2	
39	Finlay, J.	"	11	2	0 10 0 "	18 1	0 8	18 4	
40	Evans, T.	"	11	2	0 10 0 "	15 0	1 0	16 0	
41	Corkery, J.	"	11	2	0 10 0 "	13 2	0 3	13 5	
42	Work, W. N.	"	11	2	0 10 0 "	13 2	2 10	15 11	
43	Edmonds, W.	"	11	2	0 10 0 "	12 11	1 4	13 4	
44	Hodgson, R.	"	11	2	0 10 0 "	12 11	0 2	13 1	
45	Stringer, C. H.	"	11	2	0 10 0 "	12 10	0 4	13 0	
46	Morgan, F. G.	"	11	2	0 10 0 "	12 9	0 5	12 10	
47	Dunn, J.	"	11	2	0 10 0 "	12 8	0 3	12 11	
48	McMath, H. S.	"	11	2	0 10 0 "	12 8	0 6	12 11	
49	Cusack, J.	"	11	2	0 10 0 "	12 8	1 5	14 1	
50	Blanc, D.	"	11	2	0 10 0 "	22 6	..	22 6	
51	Vercoe, J.	"	11	2	0 10 6 "	22 1	..	22 1	
52	Huckstep, A. C.	"	11	2	0 10 0 "	27 9	1 4	29 1	
53	Olds, E. T.	"	11	2	0 10 0 "	21 6	..	21 6	
54	Haar, J. D.	"	11	2	0 10 0 "	15 6	0 2	15 6	
55	Castleton, H. J. A.	"	11	2	0 10 0 "	18 4	..	18 4	

RAILWAY DEPARTMENT CLASSIFICATION, 1913—*continued*.

SECOND DIVISION—*continued*.

Class 3: Maintenance—continued.

Prog. No.	Name.	Classification.				Service			Remarks.
		Designation.	Subclass.	Grade.	Rate of Pay.	Since last appointed.	Prior to Date last appointed.	For Superannuation Purposes.	
					£ s. d.	Y. M	Y. M.	Y. M.	
56	Auld, D. M.	Ganger	11	2	0 10 0 per diem	19 6	..	19 6	
57	Harlen, T.	„	11	2	0 10 0 „	17 6	..	17 6	
58	Griffin, F.	„	11	2	0 10 0 „	20 1	..	20 1	
59	Condon, M.	„	11	2	0 10 0 „	13 6	0 7	13 9	
60	Dunn, F.	„	11	2	0 10 0 „	13 5	1 3	14 7	
61	Hill, J. F.	„	11	2	0 10 0 „	13 0	0 2	13 2	
62	Sleeth, C. F.	„	11	2	0 10 0 „	12 9	0 9	13 6	
63	Jacobson, E.	„	11	2	0 10 6 „	16 8	..	16 8	
64	Campbell, J. J.	„	11	2	0 10 0 „	18 3	..	18 3	
65	Park, W.	„	11	2	0 10 0 „	12 7	0 6	13 1	
66	McCann, F. H.	„	11	2	0 10 0 „	12 6	0 4	12 10	
67	Churchouse, J. L.	„	11	2	0 10 0 „	12 4	0 3	12 7	
68	Murray, M.	„	11	2	0 10 0 „	12 4	0 2	12 6	
69	Presland, H.	„	11	2	0 10 0 „	12 3	0 9	12 3	
70	Bland, J.	„	11	2	0 10 0 „	18 9	0 4	19 1	
71	Collett, A. G.	„	11	2	0 10 0 „	12 2	0 8	12 5	
72	Love, W.	„	11	2	0 10 0 „	15 8	3 10	19 6	
73	Morrison, W.	„	11	2	0 10 0 „	12 1	0 3	12 4	
74	Judge, J. F.	„	11	2	0 10 0 „	12 1	0 2	12 3	
75	Webster, H.	„	11	2	0 10 0 „	15 11	..	15 11	
76	Phillips, J. C.	„	11	2	0 10 0 „	14 3	0 8	14 3	
77	Pollard, J.	„	11	2	0 10 0 „	14 9	0 7	15 4	
78	Pachnatz, F.	„	11	2	0 10 0 „	16 1	..	16 1	
79	Cornwall, G.	„	11	2	0 10 0 „	12 0	0 5	12 3	
80	Atkinson, H.	„	11	2	0 10 0 „	11 8	0 3	11 10	
81	Davis, F. C.	„	11	2	0 10 0 „	22 4	..	22 4	
82	Jesson, W. G.	„	11	2	0 10 0 „	11 8	1 0	12 6	
83	Fitzgerald, J.	„	11	2	0 10 0 „	19 0	0 9	19 9	
84	Bryant, T.	„	11	2	0 10 0 „	15 9	1 5	15 11	
85	Kenyon, D.	„	11	2	0 10 0 „	12 0	0 7	12 7	
86	McCann, T. J.	„	11	2	0 10 0 „	13 7	0 3	13 10	
87	Power, T.	„	11	2	0 10 0 „	12 10	0 3	13 1	
88	Richards, F.	„	11	2	0 10 0 „	12 10	0 9	13 7	
89	Mulhane, T.	„	11	2	0 10 0 „	12 7	1 3	12 10	
90	McAuley, H.	„	11	2	0 10 0 „	12 4	0 9	12 10	
91	Hogan, M.	„	11	2	0 10 0 „	12 4	0 3	12 7	
92	Tapp, J. M. P.	„	11	2	0 10 6 „	11 9	0 3	12 0	
93	Eddy, A. C.	„	11	2	0 10 0 „	11 8	0 7	12 2	
94	McMillan, C.	„	11	2	0 10 0 „	11 7	0 5	12 0	
95	Stark, J.	„	11	2	0 10 0 „	11 7	2 8	14 2	
96	McNally, J.	„	11	2	0 10 0 „	11 6	0 10	12 3	
97	Phillips, P. F.	„	11	2	0 10 0 „	11 5	0 4	11 9	
98	Head, H.	„	11	2	0 10 0 „	11 5	0 4	11 7	
99	Cook, J.	„	11	2	0 10 0 „	11 5	0 11	12 4	
100	Perry, R. J.	„	11	2	0 10 0 „	13 3	0 2	13 3	
101	Nisbet, J.	„	11	2	0 10 0 „	11 5	0 5	11 10	
102	Reynolds, W. J.	„	11	2	0 10 0 „	13 0	1 0	13 0	
103	Wadsworth, D.	„	11	2	0 10 0 „	13 0	0 9	13 3	
104	Scott, J.	„	11	2	0 10 0 „	12 11	0 11	13 6	
105	Osborne, J.	„	11	2	0 10 0 „	12 11	0 2	13 1	
106	Collins, H. J.	„	11	2	0 10 0 „	12 9	0 10	12 10	
107	White, W. A.	„	11	2	0 10 0 „	12 9	0 9	13 0	
108	Annear, J. H.	„	11	2	0 10 0 „	19 10	..	19 10	
109	Tonkin, E.	„	11	2	0 10 0 „	15 4	0 8	16 0	
110	Anderson, G. R.	„	11	2	0 10 0 „	11 5	3 4	14 8	
111	Hyland, H.	„	11	2	0 10 0 „	13 11	0 3	13 11	
112	Burgess, E.	„	11	2	0 10 0 „	12 11	0 6	13 4	
113	Gridgeman, G. J.	„	11	2	0 10 0 „	12 11	0 11	12 11	
114	Meredith, C.	„	11	2	0 10 0 „	12 8	0 5	12 11	
115	Todd, H.	„	11	2	0 10 0 „	12 4	0 8	12 8	
116	Worthington, R.	„	11	2	0 10 0 „	11 11	0 6	12 5	
117	Heavey, M.	„	11	2	0 10 0 „	11 8	0 3	11 11	
118	Patterson, T.	„	11	2	0 10 0 „	16 1	..	16 1	
119	Ferguson, R.	„	11	2	0 10 0 „	11 5	0 3	11 8	
120	Fletcher, J.	„	11	2	0 10 6 „	11 4	0 10	12 2	
121	Pedlow, H.	„	11	2	0 10 0 „	15 7	..	15 7	
122	McGillicuddy, J. D.	„	11	2	0 10 0 „	11 2	0 9	11 11	
123	Geraghty, L.	„	11	2	0 10 0 „	11 2	0 6	11 8	
124	Howatson, D.	„	11	2	0 10 0 „	11 1	0 4	11 5	
125	Cox, H. W. B.	„	11	2	0 10 0 „	4 4	7 8	12 0	
126	Foley, S.	„	11	2	0 10 0 „	4 4	13 11	18 3	
127	Southwood, H.	„	11	2	0 10 0 „	4 4	18 0	22 4	
128	Smith, J.	„	11	2	0 10 0 „	4 4	23 3	27 7	
129	McMullen, J.	„	11	2	0 10 0 „	16 9	..	16 9	
130	O'Halloran, M.	„	11	2	0 10 0 „	10 10	0 8	11 0	
131	McDonald, J.	„	11	2	0 10 0 „	13 2	1 2	13 5	
132	Naish, W. T.	„	11	2	0 10 0 „	13 0	1 2	13 4	

Railway Department Classification, 1913—*continued.*

SECOND DIVISION—*continued.*

Class 3: Maintenance—continued.

Prog. No.	Name.	Classification.				Service			Remarks.
		Designation.	Subclass.	Grade.	Rate of Pay	Since last appointed.	Prior to Date last appointed.	For Superannuation Purposes.	
					£ s. d.	Y. M.	Y. M.	Y. M.	
133	Brown, A. J.	Ganger	11	2	0 10 0 per diem	12 10	0 3	13 1	
134	Kane, J.	„	11	2	0 10 0 „	12 9	0 9	13 4	
135	Tregoweth, A. J.	„	11	2	0 10 0 „	10 8	0 11	11 7	
136	Berryman, J. M.	„	11	2	0 10 0 „	10 8	0 4	..	
137	Sage, J. A.	„	11	2	0 10 0 „	16 6	0 2	16 8	
138	Herron, J.	„	11	2	0 10 0 „	10 4	0 11	11 2	
139	Hannan, M.	„	11	2	0 10 0 „	10 1	1 2	11 3	
140	Bailey, R. J.	„	11	2	0 10 0 „	14 11	..	14 11	
141	Williams, J. S.	„	11	2	0 10 0 „	10 0	0 3	10 3	
142	Bassett, W. H.	„	11	2	0 10 0 „	9 11	0 5	10 4	
143	Murphy, J.	„	11	2	0 10 0 „	9 10	1 4	10 10	
144	Yanko, J.	„	11	2	0 10 0 „	14 10	0 4	15 1	
145	Morgan, J.	„	11	2	0 10 0 „	9 9	0 6	10 3	
146	Davey, W. J.	„	11	2	0 10 0 „	9 9	0 4	10 1	
147	Cronin, D. C.	„	11	2	0 10 0 „	9 9	1 11	10 1	
148	Roach, J.	„	11	2	0 10 0 „	9 9	0 3	10 0	
149	Phillips, J. T.	„	11	2	0 10 0 „	13 2	1 0	14 2	
150	Soper, C. E.	„	11	2	0 10 0 „	12 2	0 3	12 4	
151	Wilson, R.	„	11	2	0 10 0 „	9 9	0 10	10 6	
152	Johnson, H.	„	11	2	0 10 0 „	9 8	1 7	11 3	
153	Wickham, G.	„	11	2	0 10 0 „	9 8	5 9	15 5	
154	Mumford, P. F. G.	„	11	2	0 10 0 „	9 7	1 8	10 4	
155	Anderson, G. R.	„	11	2	0 10 0 „	9 7	0 11	9 11	
156	Rumbal, D. H.	„	11	2	0 10 0 „	9 7	0 8	10 2	
157	Bruland, M.	„	11	2	0 10 0 „	9 6	3 10	13 4	
158	Harris, G.	„	11	2	0 10 0 „	15 8	0 4	16 0	
159	Whyman, A. J.	„	11	2	0 10 0 „	15 9	0 5	16 2	
160	McKenna, T.	„	11	2	0 10 0 „	13 9	1 0	14 9	
161	Diamond, W. J.	„	11	2	0 10 0 „	12 9	0 6	12 10	
162	Baker, W.	„	11	2	0 10 0 „	11 8	0 2	11 10	
163	Stilwell, R. H. E.	„	11	2	0 10 0 „	11 7	0 7	12 2	
164	Atley, J.	„	11	2	0 10 0 „	11 7	0 3	11 10	
165	Burke, W.	„	11	2	0 10 0 „	10 7	1 9	12 0	
166	Cochrane, W.	„	11	2	0 10 0 „	10 6	0 2	10 8	
167	Bryan, J.	„	11	2	0 10 0 „	9 11	0 10	10 2	
168	Christie, J.	„	11	2	0 10 0 „	9 9	0 5	10 2	
169	Rohan, J.	„	11	2	0 10 0 „	9 6	1 2	9 9	
170	Herin, T.	„	11	2	0 10 0 „	9 6	1 0	10 1	
171	Brough, J.	„	11	2	0 10 0 „	9 5	1 9	11 2	
172	Harper, G.	„	11	2	0 10 0 „	12 9	1 10	14 7	
173	Brown, W. N.	„	11	2	0 10 0 „	9 5	1 2	10 7	
174	Larkin, B.	„	11	2	0 10 0 „	9 5	0 3	9 8	
175	Clemens, C. C.	„	11	2	0 10 0 „	9 5	0 6	9 10	
176	Howarth, J. O. F.	„	11	2	0 10 0 „	9 5	0 5	9 9	
177	Edwards, G. R.	„	11	2	0 10 0 „	9 4	0 6	9 9	
178	Roughan, T.	„	11	2	0 10 0 „	9 4	0 11	10 3	
179	Parker, H.	„	11	2	0 10 0 „	9 3	1 2	10 5	
180	Duncan, J. S.	„	11	2	0 10 0 „	9 2	2 0	11 2	
181	Ruscoe, H. L.	„	11	2	0 10 0 „	9 1	0 10	9 4	
182	Moles, J. J.	„	11	2	0 10 0 „	9 1	0 3	9 4	
183	Callaghan, J. L.	„	11	2	0 10 0 „	13 11	..	13 11	
184	Craig, D.	„	11	2	0 10 0 „	9 0	0 4	9 4	
185	Honeybone, E. G.	„	11	2	0 10 0 „	8 11	0 8	9 4	
186	Stuart, J. E.	„	11	2	0 10 0 „	8 11	0 2	9 1	
187	Beagley, E.	„	11	2	0 10 0 „	8 11	0 4	9 3	
188	Brennan, J. F.	„	11	2	0 10 0 „	8 10	3 10	12 0	
189	Knight, A. J.	„	11	2	0 10 0 „	8 10	0 8	9 1	
190	Brady, M.	„	11	2	0 10 0 „	8 9	0 5	9 2	
191	Simpson, W.	„	11	2	0 10 0 „	19 8	..	19 8	
192	Thomas, G. E. M.	„	11	2	0 10 0 „	8 9	3 3	12 0	
193	Keats, J.	„	11	2	0 10 0 „	16 1	0 10	16 11	
194	Callaghan, J.	„	11	2	0 10 0 „	14 2	0 11	14 2	
195	Clapp, W. H.	„	11	2	0 10 6 „	13 4	1 8	13 6	
196	Fitches, J.	„	11	2	0 10 0 „	12 8	0 9	13 5	
197	Pennington, W. H.	„	11	2	0 10 0 „	12 1	0 3	12 4	
198	Deaker, J.	„	11	2	0 10 0 „	12 0	0 3	12 3	
199	Dodd, H. R.	„	11	2	0 10 0 „	11 7	0 7	12 1	
200	Gordon, T.	„	11	2	0 10 0 „	11 5	1 0	12 5	
201	Pengelly, R.	„	11	2	0 10 0 „	26 7	..	26 7	
202	Bathurst, R. U.	„	11	2	0 10 0 „	12 8	0 4	13 0	
203	Rae, C. A.	„	11	2	0 10 6 „	9 9	0 6	10 3	
204	Green, W.	„	11	2	0 10 0 „	9 9	0 9	10 6	
205	Pickett, A. E.	„	11	2	0 10 0 „	9 2	2 9	11 0	
206	Reilly, T.	„	11	2	0 10 0 „	9 2	1 0	10 2	
207	Nolan, M.	„	11	2	0 10 0 „	11 4	0 3	11 7	
208	Munro, G.	„	11	2	0 10 0 „	8 9	0 11	9 8	
209	Connell, T.	„	11	2	0 10 0 „	10 6	0 8	10 10	

RAILWAY DEPARTMENT CLASSIFICATION, 1913—*continued.*

Prog. No.	Name.	Classification.				Service			Remarks.
		Designation.	Subclass.	Grade.	Rate of Pay.	Since last appointed.	Prior to Date last appointed.	For Superannuation Purposes.	
	SECOND DIVISION—*continued.*								
	Class 3: Maintenance—continued.								
					£ s. d.	Y. M.	Y. M.	Y. M.	
210	Pickett, T. H. G.	Ganger	11	2	0 10 0 per diem	8 9	1 3	9 1	
211	Devereux, J.	„	11	2	0 10 0 „	8 9	2 1	9 8	
212	Symons, W. R.	„	11	2	0 10 0 „	12 6	0 5	12 9	
213	Crawford, R.	„	11	2	0 10 0 „	8 7	3 1	10 6	
214	Bridge, P.	„	11	2	0 10 0 „	8 7	1 3	9 8	
215	Carroll, J.	„	11	2	0 10 0 „	13 0	0 2	13 1	
216	McInnes, M.	„	11	2	0 10 0 „	12 8	0 11	13 0	
217	Cole, H. E.	„	11	2	0 10 0 „	12 7	2 3	14 10	
218	Dennison, C.	„	11	2	0 10 0 „	10 7	0 3	10 10	
219	Purdue, E.	„	11	2	0 10 0 „	10 7	1 8	11 6	
220	King, G. W.	„	11	2	0 10 0 „	10 6	4 1	14 7	
221	Barratt, M.	„	11	2	0 10 0 „	9 11	1 1	11 0	
222	Smith, J.	„	11	2	0 10 0 „	9 9	0 4	10 0	
223	Gale, G.	„	11	2	0 10 0 „	9 9	0 10	10 7	
224	Hodder, A.	„	11	2	0 10 0 „	9 7	1 6	11 1	
225	Dunlop, H.	„	11	2	0 10 0 „	9 2	0 4	9 5	
226	Robertson, G.	„	11	2	0 10 0 „	15 1	0 2	15 1	
227	Agnew, H.	„	11	2	0 10 0 „	13 6	1 0	13 7	
228	Tanner, D.	„	11	2	0 10 0 „	11 10	1 3	11 10	
229	Power, J.	„	11	2	0 10 0 „	13 3	0 2	13 5	
230	Grant, W. H.	„	11	2	0 10 0 „	11 9	0 11	12 1	
231	Buckingham, A. E.	„	11	2	0 10 0 „	11 3	0 8	11 5	
232	Dellow, J. R.	„	11	2	0 10 0 „	10 5	0 11	11 4	
233	Hartley, J.	„	11	2	0 10 0 „	8 7	4 8	8 9	
234	Aitken,J.	„	11	2	0 10 0 „	8 7	0 4	8 11	
235	Dash, E. J.	„	11	2	0 10 0 „	9 5	1 2	9 10	
236	Pickering, W.	„	11	2	0 10 0 „	8 11	1 1	10 0	
237	Lennox, D.	„	11	2	0 10 0 „	8 7	1 3	9 10	
238	Williams, H. W. J.	„	11	2	0 10 0 „	9 0	1 7	10 7	
239	Morris, J. H.	„	11	2	0 10 6 „	8 4	0 3	8 7	
240	Bishop, J.	„	11	2	0 10 6 „	8 4	2 1	8 5	
241	Bowers, P.	„	11	2	0 10 0 „	8 3	0 9	8 7	
242	Curry, J.	„	11	2	0 10 0 „	11 6	0 5	11 10	
243	Cowan, G.	„	11	2	0 10 0 „	11 3	0 2	11 5	
244	Cannon, T.	„	11	2	0 10 0 „	9 11	0 4	10 3	
245	Fulton, T. N.	„	11	2	0 10 0 „	9 6	..	9 6	
246	Cox, J.	„	11	2	0 10 0 „	9 4	3 5	12 2	
247	Cunniffe, T. P.	„	11	2	0 10 6 „	9 4	0 5	9 8	
248	White, W. R.	„	11	2	0 10 6 „	9 3	1 8	10 3	
249	Harrison, F. J.	„	11	2	0 10 0 „	14 5	0 2	14 7	
250	Barron, T.	„	11	2	0 10 0 „	8 11	1 6	10 5	
251	Pullenger, R.	„	11	2	0 10 0 „	8 10	0 4	9 2	
252	Murtagh, C. J.	„	11	2	0 10 0 „	8 7	1 4	8 7	
253	Knapp, A. L.	„	11	2	0 10 0 „	12 8	1 5	14 1	
254	Morris, W.	„	11	2	0 10 0 „	8 6	1 6	10 0	
255	Brodersen, A.	„	11	2	0 10 0 „	8 3	0 2	8 5	
256	Bennett, J. W. R.	„	11	2	0 10 0 „	8 3	0 3	8 6	
257	McGuire, P.	„	11	2	0 10 0 „	8 3	0 11	9 1	
258	Moloney, D.	„	11	2	0 10 0 „	8 2	2 11	10 9	
259	McLaren, D.	„	11	2	0 10 0 „	8 2	0 3	8 5	
260	Laffy, P.	„	11	2	0 10 0 „	8 2	0 11	9 1	
261	Evans, T.	„	11	2	0 10 0 „	8 2	1 9	9 5	
262	Blyth, M. T.	„	11	2	0 10 0 „	8 2	0 10	9 0	
263	Ruscoe, G. W.	„	11	2	0 10 0 „	10 8	2 0	12 8	
264	Sebelin, T. C. A.	„	11	2	0 10 0 „	8 2	0 5	8 7	
265	Wright, C. H.	„	11	2	0 10 0 „	8 2	..	8 2	
266	Harris, T.	„	11	2	0 10 0 „	8 1	..	8 1	
267	Isbister, J. T.	„	11	2	0 10 0 „	8 0	1 3	8 8	
268	Fearn, C. T.	„	11	2	0 10 0 „	8 0	..	8 0	
269	Cunningham, J.	„	11	2	0 10 0 „	11 4	1 0	11 10	
270	Gruschow, J.	„	11	2	0 10 0 „	11 0	2 2	13 2	
271	West, T. W.	„	11	2	0 10 0 „	8 10	4 5	13 3	
272	Kerr, A. J.	„	11	2	0 10 0 „	8 9	0 6	9 3	
273	Ogilvie, A. N.	„	11	2	0 10 0 „	8 8	0 7	9 3	
274	Campbell, C.	„	11	2	0 10 0 „	8 0	0 5	8 5	
275	Dallard, C. H.	„	11	2	0 10 0 „	15 0	..	15 0	
276	O'Neill, D.	„	11	2	0 10 0 „	8 0	0 6	8 0	
277	Sherriff, R.	„	11	2	0 10 0 „	7 11	0 4	8 3	
278	Parker, A. G.	„	11	2	0 10 0 „	7 11	..	7 11	
279	Williams, J. G.	„	11	2	0 10 0 „	7 11	..	7 11	
280	Williams, A. R.	„	11	2	0 10 0 „	7 11	2 10	10 9	
281	Ritchie, W.	„	11	2	0 10 0 „	7 10	0 1	7 11	
282	Brown, R.	„	11	2	0 10 0 „	7 10	1 2	8 2	
283	Rollerson, G. T.	„	11	2	0 10 6 „	7 10	..	7 10	
1	McDavitt, C.	Surfaceman	12	..	0 9 0 „	13 10	0 2	14 0	
2	Dockery, W.	„	12	..	0 9 0 „	8 7	0 6	9 1	

RAILWAY DEPARTMENT CLASSIFICATION, 1913—*continued.*

SECOND DIVISION—*continued.*

Class 3: Maintenance—continued.

Prog. No.	Name.	Classification.				Service			Remarks.
		Designation.	Subclass.	Grade.	Rate of Pay.	Since last appointed.	Prior to Date last appointed.	For Superannuation Purposes.	
					£ s. d.	Y. M.	Y. M.	Y. M.	
3	Clark, W.	Surfaceman	12	..	0 9 0 per diem	4 4	3 0	7 4	
4	Geaney, W.	„	12	..	0 9 0 „	9 2	0 9	9 11	
5	Sutherland, A.	„	12	..	0 9 0 „	8 11	0 3	9 2	
6	Aitken, W.	„	12	..	0 9 0 „	21 0	2 0	21 0	
7	Graham, R. R. C.	„	12	..	0 9 0 „	14 3	..	14 3	
8	Chalmers, T.	„	12	..	0 9 0 „	8 7	0 3	8 10	
9	Bruce, J.	Fencer	13	..	0 9 0 „	10 6	0 4	10 9	
10	Clarke, T. F.	Surfaceman	12	..	0 9 0 „	23 8	..	23 8	
11	Briggs, A. E.	„	12	..	0 9 0 „	10 3	0 4	10 7	
12	Coombes, W. J.	„	12	..	0 9 0 „	8 10	0 2	9 0	
13	Vowless, G.	„	12	..	0 9 0 „	18 6	1 3	18 6	
14	Hosking, C.	„	12	..	0 9 0 „	30 10	0 5	31 3	
15	Limmer, L. C.	„	12	..	0 9 0 „	10 4	0 7	10 11	
16	Steel, T.	„	12	..	0 9 0 „	19 8	..	19 8	
17	Johnson, J.	„	12	..	0 9 0 „	14 3	2 1	16 1	
18	Morrissey, J.	„	12	..	0 9 0 „	14 11	0 10	14 11	
19	Leamy, T.	„	12	..	0 9 0 „	17 10	..	17 10	
20	Hennessy, J.	„	12	..	0 9 0 „	22 4	8 3	30 7	
21	Glynn, M.	„	12	..	0 9 0 „	20 3	..	20 3	
22	Braun, C.	„	12	..	0 9 0 „	13 9	1 0	14 7	
23	Westbury, G. F.	„	12	..	0 9 0 „	21 4	..	21 4	
24	Procter, T. C.	„	12	..	0 9 0 „	19 4	..	19 4	
25	Tudor, W. E.	„	12	..	0 9 0 „	4 4	16 11	21 3	
26	Crisp, J. W. T.	„	12	..	0 9 0 „	18 9	2 9	18 9	
27	McNicol, J.	„	12	..	0 9 0 „	18 0	0 11	18 11	
28	King, F. H.	„	12	..	0 9 0 „	20 8	..	20 8	
29	Finlayson, D.	„	12	..	0 9 0 „	22 11	..	22 11	
30	Fletcher, T.	„	12	..	0 9 0 „	29 10	..	29 10	
31	Lenihan, M.	„	12	..	0 9 0 „	23 1	..	23 1	
32	McIntyre, R.	„	12	..	0 9 0 „	15 1	1 3	15 1	
33	Absolum, W.	„	12	..	0 9 0 „	27 7	..	27 7	
34	Treanor, J. R.	„	12	..	0 9 0 „	12 0	1 6	13 6	
35	Rampton, C.	„	12	..	0 9 0 „	17 3	0 11	18 2	
36	Dunlop, D. J.	„	12	..	0 9 0 „	15 0	1 2	15 1	
37	Breeze, J. J.	„	12	..	0 9 0 „	18 1	0 9	18 10	
38	Cossey, W. H.	„	12	..	0 9 0 „	22 7	..	22 7	
39	Wheeler, F. H.	„	12	..	0 9 0 „	20 11	..	20 11	
40	Skinner, G.	„	12	..	0 9 0 „	22 7	..	22 7	
41	Treanor, H.	„	12	..	0 9 0 „	12 0	1 5	13 5	
42	Hamilton, R.	„	12	..	0 9 0 „	20 4	2 1	20 4	
43	Duncan, W.	„	12	..	0 9 0 „	23 6	..	23 6	
44	Patterson, R. J.	„	12	..	0 9 0 „	19 2	..	19 2	
45	Olds, J. G.	„	12	..	0 9 0 „	26 7	..	26 7	
46	Cook, T.	Labourer	14	1	0 9 0 „	32 2	..	32 2	
47	O'Keeffe, A.	Surfaceman	12	..	0 9 0 „	22 0	1 0	23 0	
48	Parker, G. E. P.	Surfaceman-miner	12	..	0 9 6 „	17 0	2 7	19 5	
49	Smith, I.	Surfaceman	12	..	0 9 0 „	36 10	..	36 10	
50	Quigley, N.	„	12	..	0 9 0 „	36 2	..	36 2	
51	Finlay, D.	„	12	..	0 9 0 „	36 0	..	36 0	
52	Thomas, J. H.	„	12	..	0 9 0 „	35 2	..	35 2	
53	Reason, E.	„	12	..	0 9 0 „	34 7	..	34 7	
54	Vercoe, B.	„	12	..	0 9 0 „	32 1	..	32 1	
55	Miller, W.	„	12	..	0 9 0 „	31 9	..	31 9	
56	Small, M.	„	12	..	0 9 0 „	31 9	..	31 9	
57	Wright, D.	„	12	..	0 9 0 „	31 9	1 3	32 11	
58	Leddy, J.	„	12	..	0 9 0 „	31 7	..	31 7	
59	Savage, R.	„	12	..	0 9 0 „	31 5	..	31 5	
60	Sargison, H.	„	12	..	0 9 0 „	34 7	..	34 7	
61	Cribb, A.	„	12	..	0 9 0 „	30 10	..	30 10	
62	Trollope, H.	„	12	..	0 9 0 „	30 10	..	30 10	
63	Hopkins, W.	„	12	..	0 9 0 „	30 8	3 3	33 11	
64	Clifford, P.	„	12	..	0 9 0 „	30 6	..	30 6	
65	McKittrick, R.	„	12	..	0 9 0 „	30 5	0 1	30 6	
66	Appleby, L.	„	12	..	0 9 0 „	30 4	..	30 4	
67	Blee, J.	„	12	..	0 9 0 „	29 8	0 2	29 10	
68	Moroney, T.	„	12	..	0 9 0 „	29 6	..	29 6	
69	Rice, M.	„	12	..	0 9 0 „	29 0	..	29 0	
70	Winton, J. W.	„	12	..	0 9 0 „	28 6	..	28 6	
71	Murray, T.	„	12	..	0 9 0 „	28 6	..	28 6	
72	Gillies, H.	„	12	..	0 9 0 „	28 3	..	28 3	
73	Gillies, S.	„	12	..	0 9 0 „	28 3	..	28 3	
74	Jolly, C.	Labourer	14	1	0 9 0 „	27 11	0 5	27 11	
75	Robertson, J.	Surfaceman	12	..	0 9 0 „	27 10	..	27 10	
76	Jones, R.	„	12	..	0 9 0 „	27 3	..	27 3	
77	Rattley, G.	„	12	..	0 9 0 „	27 2	..	27 2	
78	Neels, J. R.	„	12	..	0 9 0 „	27 0	..	27 0	
79	Smith, W.	„	12	..	0 9 0 „	26 9	1 4	28 1	

RAILWAY DEPARTMENT CLASSIFICATION, 1913—*continued.*

Prog. No.	Name.	Classification.				Service			Remarks.
		Designation.	Subclass.	Grade.	Rate of Pay.	Since last appointed.	Prior to Date last appointed.	For Superannuation Purposes.	
		SECOND DIVISION—*continued.* *Class 3: Maintenance*—continued.							
					£ s. d.	Y. M.	Y. M.	Y. M.	
80	Parker, F.	Surfaceman	12	..	0 9 0 per diem	26 9	..	26 9	
81	Thomas, J.	„	12	..	0 9 0 „	26 6	0 1	26 7	
82	Kay, D.	„	12	..	0 9 0 „	26 5	..	26 5	
83	Mill, D.	„	12	..	0 9 0 „	26 5	..	26 5	
84	Coffey, J.	„	12	..	0 9 0 „	26 2	..	26 2	
85	Huse, C. H. F.	„	12	..	0 9 0 „	25 11	2 10	28 9	
86	Black, J.	„	12	..	0 9 0 „	25 9	..	25 9	
87	Ford, M.	„	12	..	0 9 6 „	25 3	..	25 3	
88	Hogg, S.	„	12	..	0 9 0 „	24 9	..	24 9	
89	Foard, M.	„	12	..	0 9 0 „	24 6	..	24 6	
90	Mills, M.	„	12	..	0 9 0 „	24 2	..	24 2	
91	Duncan, R.	„	12	..	0 9 0 „	23 8	..	23 8	
92	Harris, H.	„	12	..	0 9 0 „	23 6	..	23 6	
93	Rance, T.	„	12	..	0 9 0 „	23 1	6 7	29 8	
94	Musgrove, H.	„	12	..	0 9 0 „	27 5	..	27 5	
95	McLean, R.	„	12	..	0 9 0 „	22 6	..	22 6	
96	Glasson, J.	„	12	..	0 9 0 „	22 5	6 8	29 1	
97	McNamara, M.	„	12	..	0 9 0 „	22 4	4 11	27 3	
98	Callick, W.	„	12	..	0 9 0 „	35 6	..	35 6	
99	Phelan, J.	„	12	..	0 9 0 „	22 2	0 4	22 6	
100	Hewitt, J.	„	12	..	0 9 0 „	22 1	0 9	22 10	
101	Pike, R.	„	12	..	0 9 0 „	21 3	9 7	..	
102	Brennan, James	„	12	..	0 9 0 „	20 3	1 5	..	
103	Green, C.	„	12	..	0 9 0 „	20 0	0 3	20 3	
104	Diggin, M.	„	12	..	0 9 0 „	19 11	3 2	22 11	
105	Mouat, P.	„	12	..	0 9 0 „	20 11	1 2	..	
106	Cowie, J. P.	„	12	..	0 9 0 „	19 10	1 2	21 0	
107	Duggan, J.	„	12	..	0 9 0 „	19 10	14 1	19 10	
108	Thomas, W.	„	12	..	0 9 0 „	19 10	5 3	19 10	
109	O'Meara, J.	„	12	..	0 9 0 „	29 0	..	29 0	
110	Mills, C. D.	„	12	..	0 9 0 „	24 7	..	24 7	
111	Hennessy, T.	„	12	..	0 9 0 „	19 6	2 3	21 9	
112	Wannicott, G.	„	12	..	0 9 0 „	19 5	0 4	19 5	
113	Long, W.	„	12	..	0 9 0 „	19 4	..	19 4	
114	Labrum, T. A.	„	12	..	0 9 0 „	19 4	1 10	19 4	
115	McKenzie, R.	„	12	..	0 9 0 „	18 8	..	18 8	
116	Cunningham, J.	„	12	..	0 9 0 „	23 0	..	23 0	
117	Parrish, W. H. F.	„	12	..	0 9 0 „	18 6	..	18 6	
118	Sullivan, D.	„	12	..	0 9 6 „	18 4	0 8	19 0	
119	Johnson, E. F.	„	12	..	0 9 0 „	21 7	..	21 7	
120	Condon, J.	„	12	..	0 9 0 „	18 1	2 11	21 0	
121	Duggan, J.	„	12	..	0 9 0 „	18 1	2 2	18 8	
122	Kirshaw, C.	„	12	..	0 9 0 „	18 0	0 3	18 3	
123	O'Neill, P.	„	12	..	0 9 0 „	17 11	1 5	19 4	
124	Craig, J.	„	12	..	0 9 0 „	17 11	0 7	18 6	
125	Armstrong, R.	„	12	..	0 9 0 „	17 10	..	17 10	
126	O'Leary, D.	„	12	..	0 9 0 „	17 10	..	17 10	
127	Brown, J.	„	12	..	0 9 0 „	17 6	1 5	18 11	
128	McGill, W.	„	12	..	0 9 0 „	17 5	0 6	17 6	
129	Hope, H.	„	12	..	0 9 0 „	23 3	..	23 3	
130	Curtayne, J.	„	12	..	0 9 0 „	22 3	..	22 3	
131	McManus, J.	„	12	..	0 9 0 „	17 1	0 2	17 1	
132	Clarke, C.	„	12	..	0 9 0 „	25 10	..	..	
133	Higgins, P.	„	12	..	0 9 0 „	17 1	8 6	19 8	
134	Taylor, W.	„	12	..	0 9 0 „	21 11	..	21 11	
135	Meek, J.	„	12	..	0 9 0 „	21 1	..	21 1	
136	Moriarty, J.	„	12	..	0 9 0 „	16 9	..	16 9	
137	Holman, J.	„	12	..	0 9 0 „	16 1	2 5	18 6	
138	Leahey, J.	„	12	..	0 9 0 „	15 7	2 4	17 10	
139	Galvin, P.	„	12	..	0 9 0 „	15 7	1 5	17 0	
140	O'Connor, D.	„	12	..	0 9 0 „	16 10	..	16 10	
141	O'Connor, P.	„	12	..	0 9 0 „	15 7	4 5	20 0	
142	Robb, W.	„	12	..	0 9 0 „	15 7	4 11	..	
143	Twomey, T.	„	12	..	0 9 0 „	15 4	..	15 4	
144	Rankin, A.	„	12	..	0 9 0 „	18 11	..	18 11	
145	Cloherty, P.	„	12	..	0 9 0 „	15 2	0 6	15 8	
146	Mulcahy, P. S.	„	12	..	0 9 0 „	15 1	..	15 1	
147	Kennedy, T.	„	12	..	0 9 0 „	15 1	..	15 1	
148	Flynn, P.	„	12	..	0 9 0 „	15 0	0 11	15 0	
149	Brennan, M.	„	12	..	0 9 0 „	15 0	0 3	15 0	
150	Antill, W.	„	12	..	0 9 0 „	15 0	0 1	15 0	
151	McMillan, N. A.	„	12	..	0 9 0 „	14 11	8 3	..	
152	Hartley, John	„	12	..	0 9 0 „	14 11	1 1	16 0	
153	Coggins, J.	„	12	..	0 9 0 „	21 1	..	21 1	
154	O'Halloran, P.	„	12	..	0 9 0 „	14 10	0 3	15 1	
155	Dalley, N.	„	12	..	0 9 0 „	14 10	0 11	15 4	
156	Ford, M.	„	12	..	0 9 0 „	14 10	5 10	14 11	

RAILWAY DEPARTMENT CLASSIFICATION, 1913—*continued.*

SECOND DIVISION—*continued.*

Class 3: Maintenance—continued.

Prog. No.	Name.	Classification.				Service			Remarks.
		Designation.	Subclass.	Grade.	Rate of Pay.	Since last appointed.	Prior to Date last appointed.	For Superannuation Purposes.	
					£ s. d.	Y. M.	Y. M.	Y. M.	
157	Davis, T. W.	Surfaceman	12	..	0 9 0 per diem	14 10	0 10	14 10	
158	Baken, R.	„	12	..	0 9 0 „	14 10	0 7	14 10	
159	Walsh, J.	„	12	..	0 9 0 „	14 10	2 4	14 10	
160	Clutterbuck, C. E.	„	12	..	0 9 0 „	14 10	2 2	16 1	
161	Buckley, J. M.	„	12	..	0 9 0 „	14 9	1 4	16 1	
162	Keating, J.	„	12	..	0 9 0 „	14 7	0 3	14 10	
163	Stewart, A.	„	12	..	0 9 0 „	14 7	0 10	15 5	
164	Parsons, F. C.	„	12	..	0 9 0 „	14 4	0 5	14 4	
165	Cairns, D.	„	12	..	0 9 0 „	14 2	0 2	14 4	
166	Lee, I. W.	„	12	..	0 9 0 „	14 0	0 3	14 2	
167	Frame, T. J.	„	12	..	0 9 0 „	13 11	0 3	13 11	
168	Dunlop, W. C.	„	12	..	0 9 0 „	13 10	0 6	13 10	
169	Craig, A.	„	12	..	0 9 0 „	13 10	0 8	13 10	
170	Nicholson, J. W.	„	12	..	0 9 0 „	13 9	0 11	13 10	
171	McAnnalley, J.	„	12	..	0 9 0 „	13 9	0 8	14 4	
172	Marchant, J.	„	12	..	0 9 0 „	13 8	0 2	13 10	
173	Condon, P.	„	12	..	0 9 0 „	13 7	0 3	13 10	
174	Burke, R. A.	„	12	..	0 9 0 „	13 7	0 8	14 3	
175	Morrison, G.	„	12	..	0 9 0 „	13 7	0 2	..	
176	Kealy, J.	„	12	..	0 9 0 „	13 7	0 6	14 0	
177	Skellern, G. E.	„	12	..	0 9 0 „	13 6	0 2	13 8	
178	Corkery, T.	„	12	..	0 9 0 „	13 6	1 4	13 11	
179	Woods, T.	„	12	..	0 9 0 „	13 5	0 9	13 10	
180	O'Donnell, T.	„	12	..	0 9 0 „	13 5	0 2	13 7	
181	Simpson, F.	„	12	..	0 9 0 „	13 4	0 6	13 5	
182	McKenzie, J.	„	12	..	0 9 0 „	13 2	0 5	13 6	
183	Phillipson, J. H.	„	12	..	0 9 0 „	12 11	0 10	13 3	
184	Kennedy, R.	„	12	..	0 9 0 „	12 11	0 5	13 2	
185	Drew, W. G.	„	12	..	0 9 0 „	12 10	0 9	12 10	
186	Hill, T. G.	„	12	..	0 9 0 „	19 3	..	19 3	
187	Pullar, J. A.	„	12	..	0 9 0 „	12 9	0 7	12 10	
188	Burns, J.	„	12	..	0 9 0 „	12 9	3 5	12 10	
189	Fitzgerald, E.	„	12	..	0 9 0 „	12 9	1 0	12 10	
190	Snaddon, A.	„	12	..	0 9 0 „	12 8	1 6	14 2	
191	Dickson, C. J. T.	„	12	..	0 9 0 „	12 7	1 1	13 8	
192	Trower, A. G.	„	12	..	0 9 0 „	12 7	0 6	13 1	
193	Dennan, C. T.	„	12	..	0 9 0 „	12 7	1 1	13 8	
194	Fairley, T.	„	12	..	0 9 6 „	12 7	0 11	13 6	
195	Hastings, J. R.	„	12	..	0 9 0 „	12 7	0 6	12 9	
196	Noble, J.	„	12	..	0 9 0 „	12 5	1 11	14 4	
197	O'Leary, S.	„	12	..	0 9 0 „	12 5	0 6	12 11	
198	Hosking, E.	„	12	..	0 9 0 „	12 5	0 8	12 8	
199	Cogger, T.	„	12	..	0 9 0 „	12 4	..	12 4	
200	Matheson, J. L.	„	12	..	0 9 0 „	12 4	0 5	12 9	
201	O'Connor, M.	„	12	..	0 9 0 „	12 3	0 8	12 6	
202	O'Donnell, E. J.	„	12	..	0 9 0 „	12 3	0 9	12 3	
203	Gilchrist, A.	„	12	..	0 9 6 „	12 2	3 10	16 0	
204	O'Brien, P.	„	12	..	0 9 0 „	12 1	2 2	13 3	
205	Towers, W. N.	„	12	..	0 9 0 „	12 1	1 9	13 8	
206	Andrew, B.	„	12	..	0 9 0 „	12 1	1 0	13 1	
207	Ott, A.	„	12	..	0 9 0 „	12 0	0 8	12 1	
208	Thomas, D.	„	12	..	0 9 0 „	12 0	0 9	12 9	
209	Munn, L.	„	12	..	0 9 0 „	12 0	0 5	12 5	
210	Walsh, J. M.	„	12	..	0 9 0 „	12 0	0 10	12 8	
211	Jackson, H. L.	„	12	..	0 9 0 „	11 11	0 7	12 6	
212	O'Dowd, J.	„	12	..	0 9 0 „	11 11	0 7	12 6	
213	Frew, W. J.	Labourer	14	1	0 9 0 „	11 11	1 6	13 4	
214	Chalmers, C.	Surfaceman	12	..	0 9 0 „	11 10	0 4	12 2	
215	Stevenson, W.	„	12	..	0 9 0 „	11 10	0 4	12 2	
216	Goble, W. H.	„	12	..	0 9 0 „	11 10	1 0	12 6	
217	Allington, G.	„	12	..	0 9 0 „	11 9	0 8	12 5	
218	Thompson, W. G. T.	„	12	..	0 9 0 „	11 8	0 4	12 1	
219	O'Connor, T.	„	12	..	0 9 0 „	11 8	0 6	12 2	
220	Cox, A. H.	„	12	..	0 9 0 „	11 8	2 4	11 8	
221	Palmer, J.	„	12	..	0 9 0 „	11 8	0 11	12 7	
222	Moodie, J.	„	12	..	0 9 0 „	11 8	1 3	12 11	
223	Magonnell, F.	„	12	..	0 9 0 „	11 7	1 0	12 7	
224	Jordan, S. H.	„	12	..	0 9 0 „	11 7	0 7	12 2	
225	Booth, J.	„	12	..	0 9 0 „	11 7	0 6	..	
226	Johnson, R.	„	12	..	0 9 0 „	11 7	0 5	11 7	
227	Reidy, M.	„	12	..	0 9 0 „	11 7	1 7	12 1	
228	Mead, C. W.	„	12	..	0 9 0 „	11 6	0 3	11 9	
229	Hope, J. R.	„	12	..	0 9 0 „	19 0	..	19 0	
230	McDonald, A.	„	12	..	0 9 0 „	11 6	0 10	11 9	
231	Boland, P.	„	12	..	0 9 0 „	11 6	1 0	11 7	
232	Molloy, T. H.	„	12	..	0 9 0 „	11 6	0 3	11 9	
233	Messer, G. A.	„	12	..	0 9 0 „	11 5	1 0	11 6	

Railway Department Classification, 1913—*continued.*

SECOND DIVISION—*continued.*

Class 3: Maintenance—continued.

Prog. No.	Name.	Classification.				Service			Remarks.
		Designation.	Subclass.	Grade.	Rate of Pay.	Since last appointed.	Prior to Date last appointed.	For Superannuation Purposes.	
					£ s. d.	Y. M.	Y. M.	Y. M.	
234	Sheehan, W.	Surfaceman	12	..	0 9 0 per diem	11 4	0 6	11 9	
235	Todd, W. R.	„	12	..	0 9 0 „	11 4	0 11	11 10	
236	Kavanagh, H. J.	„	12	..	0 9 0 „	11 3	0 2	11 5	
237	Stimpson, H. J.	„	12	..	0 9 0 „	18 3	..	18 3	
238	Hunt, P. T.	„	12	..	0 9 0 „	11 0	1 0	12 0	
239	Johnston, W.	„	12	..	0 9 0 „	11 0	0 5	11 1	
240	Kelliher, T.	„	12	..	0 9 0 „	10 11	1 2	11 8	
241	Scadden, W.	„	12	..	0 9 0 „	10 11	0 6	11 3	
242	Dockary, S. J.	„	12	..	0 9 0 „	10 11	1 8	12 5	
243	Kelly, J.	„	12	..	0 9 0 „	10 10	0 2	10 11	
244	Lane, A. S.	„	12	..	0 9 0 „	10 10	0 7	11 5	
245	Peden, J. D.	„	12	..	0 9 0 „	10 8	1 2	11 10	
246	O'Brien, T.	„	12	..	0 9 0 „	10 8	0 8	11 0	
247	Hannifin, J.	„	12	..	0 9 0 „	10 8	0 6	11 1	
248	Sutherland, C. E.	„	12	..	0 9 0 „	10 6	0 3	10 9	
249	Ash, A.	„	12	..	0 9 0 „	10 6	2 6	11 9	
250	Adams, W. E.	„	12	..	0 9 0 „	10 5	1 4	10 7	
251	Kearns, E. F. P.	„	12	..	0 9 0 „	10 5	0 8	10 6	
252	Morrison, G. F.	„	12	..	0 9 0 „	10 3	0 2	10 5	
253	Hinton, H. G.	„	12	..	0 9 0 „	10 3	0 3	10 6	
254	Stott, W. H.	„	12	..	0 9 0 „	10 2	1 5	11 6	
255	Thomas, E.	„	12	..	0 9 0 „	10 1	1 4	10 9	
256	Anderson, W.	„	12	..	0 9 0 „	10 1	1 2	11 0	
257	Syers, A.	„	12	..	0 9 0 „	15 11	..	15 11	
258	Dwyer, M.	„	12	..	0 9 0 „	9 11	0 3	10 2	
259	Fitzgerald, M.	„	12	..	0 9 0 „	9 11	1 5	11 4	
260	Timms, R.	„	12	..	0 9 0 „	9 11	0 4	10 3	
261	Horne, T. R.	„	12	..	0 9 0 „	9 10	0 5	10 3	
262	Pickup, F.	„	12	..	0 9 0 „	9 10	1 9	10 2	
263	Waller, G. R. A.	„	12	..	0 9 0 „	9 10	0 7	10 5	
264	Forbes, H. A.	„	12	..	0 9 0 „	9 9	..	9 9	
265	McPherson, G.	„	12	..	0 9 0 „	9 9	1 11	9 11	
266	O'Connor, J.	„	12	..	0 9 0 „	9 9	1 2	10 10	
267	Wallace, J.	„	12	..	0 9 0 „	9 9	0 8	10 3	
268	Bubb, W. H.	„	12	..	0 9 0 „	9 7	0 3	9 10	
269	Young, J. B.	„	12	..	0 9 0 „	9 7	4 9	13 7	
270	Killalea, J.	„	12	..	0 9 0 „	9 7	1 8	11 3	
271	Cook, F.	„	12	..	0 9 0 „	9 7	1 6	9 10	
272	Hilland, T.	„	12	..	0 9 0 „	9 7	0 3	9 9	
273	Greene, W.	Platelayer	12	..	0 9 6 „	9 6	0 10	10 4	
274	Fitzgerald, W.	Surfaceman	12	..	0 9 0 „	9 6	0 6	10 0	
275	McIntosh, J.	„	12	..	0 9 0 „	9 4	2 9	10 6	
276	Hesp, G. A. A.	„	12	..	0 9 0 „	9 4	0 3	9 7	
277	McClymont, J.	„	12	..	0 9 0 „	9 4	1 7	10 7	
278	McIntyre, D.	„	12	..	0 9 0 „	9 4	1 3	9 9	
279	Bain, W. N.	„	12	..	0 9 0 „	9 4	1 1	10 5	
280	Cuthbertson, A.	„	12	..	0 9 0 „	9 4	0 8	10 0	
281	Holland, M.	„	12	..	0 9 0 „	9 4	0 3	9 7	
282	Slines, P.	„	12	..	0 9 0 „	9 3	5 3	11 7	
283	Johnson, A. E. T.	„	12	..	0 9 0 „	9 3	0 6	9 9	
284	Phillips, C.	„	12	..	0 9 0 „	9 2	0 6	9 8	
285	Ronan, M.	„	12	..	0 9 0 „	9 2	0 7	9 6	
286	Gibson, A.	„	12	..	0 9 0 „	9 1	1 0	10 1	
287	Marshall, C. H.	„	12	..	0 9 0 „	9 1	0 5	9 5	
288	Pippen, E. P. B.	„	12	..	0 9 0 „	9 0	0 11	9 11	
289	Meager, T.	„	12	..	0 9 0 „	9 0	0 5	9 5	
290	Murray, J.	„	12	..	0 9 0 „	9 0	1 4	9 2	
291	Max, A. J.	„	12	..	0 9 0 „	9 0	0 8	9 4	
292	Trounce, J.	„	12	..	0 9 0 „	8 11	0 6	9 5	
293	Nelson, J. H.	„	12	..	0 9 0 „	8 11	2 11	9 4	
294	Vallilley, T. G.	„	12	..	0 9 0 „	8 11	0 6	9 3	
295	Collins, M.	„	12	..	0 9 0 „	8 11	1 9	9 3	
296	Norquay, G.	„	12	..	0 9 0 „	8 11	0 2	9 1	
297	Pike, C. H.	„	12	..	0 9 0 „	8 11	1 1	10 0	
298	Hodgkinson, S.	„	12	..	0 9 0 „	8 11	1 4	10 3	
299	Manning, J. L.	„	12	..	0 9 0 „	8 11	2 7	9 5	
300	McKay, D.	„	12	..	0 9 0 „	8 11	0 4	9 3	
301	Salter, W. E.	Labourer	14	1	0 9 0 „	8 11	0 6	9 5	
302	Timms, W.	„	14	1	0 9 0 „	8 10	3 9	10 10	
303	O'Donnell, T.	Surfaceman	12	..	0 9 0 „	8 10	0 1	8 11	
304	Donnelly, J.	„	12	..	0 9 0 „	8 10	0 3	9 1	
305	Dixon, W. J. P.	„	12	..	0 9 0 „	8 9	1 9	10 3	
306	Cameron, J. H.	„	12	..	0 9 0 „	8 9	0 5	9 2	
307	Prendergast, T.	„	12	..	0 9 0 „	8 9	1 6	10 2	
308	Lundy, J.	„	12	..	0 9 0 „	8 8	0 4	8 11	
309	Forster, F.	„	12	..	0 9 0 „	8 7	1 4	9 11	
310	Reilly, M.	„	12	..	0 9 0 „	8 7	1 0	9 7	

RAILWAY DEPARTMENT CLASSIFICATION, 1913—*continued.*

SECOND DIVISION—*continued.*

Class 3: Maintenance—continued.

Prog. No.	Name.	Classification.				Service			Remarks.
		Designation.	Subclass.	Grade.	Rate of Pay.	Since last appointed.	Prior to Date last appointed.	For Superannuation Purposes.	
					£ s. d.	Y. M.	Y. M.	Y. M.	
311	Gorinski, B.	Surfaceman	12	..	0 9 0 per diem	8 7	0 8	9 3	
312	Hughes, T. E.	„	12	..	0 9 0 „	8 7	0 4	8 11	
313	Creamer, W.	„	12	..	0 9 0 „	8 7	1 1	8 10	
314	Thom, R.	„	12	..	0 9 0 „	8 7	1 5	10 0	
315	Ogg, J.	„	12	..	0 9 0 „	8 7	2 8	11 3	
316	Hynes, J.	„	12	..	0 9 0 „	8 7	0 5	8 11	
317	Jackson, J. W. H.	„	12	..	0 9 0 „	8 7	3 8	10 9	
318	Meade, A. J.	„	12	..	0 9 0 „	8 7	0 3	8 10	
319	Cavanagh, W.	„	12	..	0 9 0 „	8 6	0 4	8 10	
320	Macnamara, P.	„	12	..	0 9 0 „	8 6	0 3	8 9	
321	Crawford, T.	„	12	..	0 9 0 „	8 6	0 1	8 6	
322	Duncan, A. C.	„	12	..	0 9 0 „	8 6	0 9	8 10	
323	Youngman, J. P.	„	12	..	0 9 0 „	8 6	..	8 6	
324	Terry, W.	„	12	..	0 9 0 „	8 6	0 1	8 7	
325	Rae, J. M.	„	12	..	0 9 0 „	8 5	..	8 5	
326	Davidson, R. P.	„	12	..	0 9 0 „	8 5	..	8 5	
327	Jensen, J. P.	„	12	..	0 9 0 „	8 5	2 7	8 10	
328	Palmer, W. S.	„	12	..	0 9 0 „	8 4	2 2	10 3	
329	McGlone, R.	„	12	..	0 9 0 „	8 4	0 2	8 4	
330	Sinclair, W. Y.	„	12	..	0 9 0 „	8 4	1 5	9 2	
331	Casey, J. J.	Platelayer	12	..	0 9 6 „	8 4	4 11	12 11	
332	Gamble, J.	Surfaceman	12	..	0 9 6 „	8 4	0 3	8 7	
333	Ramsay, J. W.	„	12	..	0 9 0 „	8 3	2 1	10 4	
334	Jennison, C.	„	12	..	0 9 0 „	8 3	4 0	9 1	
335	Boyd, T. G.	„	12	..	0 9 0 „	8 3	2 10	8 7	
336	Findlay, J.	„	12	..	0 9 0 „	8 2	0 10	9 0	
337	Page, J.	„	12	..	0 9 6 „	8 2	1 3	9 5	
338	Reid, D. F. H.	„	12	..	0 9 6 „	8 2	1 8	9 5	
339	Stephen, W.	„	12	..	0 9 0 „	8 2	2 2	9 7	
340	McLachlan, A.	„	12	..	0 9 0 „	8 2	0 9	8 9	
341	Witte, W. G.	„	12	..	0 9 0 „	8 2	1 4	9 5	
342	Slater, J.	„	12	..	0 9 0 „	8 2	0 5	8 7	
343	Hare, A. G.	„	12	..	0 9 0 „	8 2	0 5	8 6	
344	Pidgeon, W. J.	„	12	..	0 9 0 „	8 2	..	8 2	
345	May, W. G.	„	12	..	0 9 0 „	8 1	0 1	8 2	
346	Wilson, H.	„	12	..	0 9 0 „	8 1	0 8	8 9	
347	Egan, M. L.	„	12	..	0 9 0 „	8 1	..	8 1	
348	Doherty, J.	„	12	..	0 9 0 „	8 1	1 1	9 0	
349	Latham, A. E.	„	12	..	0 9 0 „	8 0	2 4	10 4	
350	Harvey, L. G.	„	12	..	0 9 0 „	8 0	0 6	8 6	
351	Brown, R.	„	12	..	0 9 0 „	8 0	0 5	8 5	
352	Henderson, D.	„	12	..	0 9 0 „	8 0	0 3	8 3	
353	Green, T.	„	12	..	0 9 0 „	14 5	..	14 5	
354	Wooding, G. T.	„	12	..	0 9 0 „	8 0	0 5	8 5	
355	Weekes, A. R. L.	„	12	..	0 9 0 „	8 0	0 2	8 2	
356	Horgan, J.	„	12	..	0 9 0 „	8 0	0 8	8 0	
357	Coffey, M. D.	„	12	..	0 9 0 „	8 0	0 3	8 3	
358	Carroll, J. C.	„	12	..	0 9 0 „	8 0	0 5	8 3	
359	Moran, J.	„	12	..	0 9 0 „	7 11	0 4	8 3	
360	Kenny, M.	„	12	..	0 9 0 „	7 11	0 7	8 6	
361	Anderson, B. O.	„	12	..	0 9 0 „	7 11	..	7 11	
362	Dodd, G. W.	„	12	..	0 9 0 „	7 11	..	7 11	
363	Kenny, S.	„	12	..	0 9 0 „	7 11	0 8	8 6	
364	Barrar, H. H.	„	12	..	0 9 0 „	7 10	2 4	9 9	
365	King, J.	„	12	..	0 9 0 „	7 10	0 4	8 2	
366	Hartnoll, W. F.	„	12	..	0 9 0 „	7 10	..	7 10	
367	Meek, J.	Surfaceman-miner	12	..	0 9 6 „	7 10	3 3	11 1	
368	McDonald, P. G.	Surfaceman	12	..	0 9 0 „	7 10	0 10	8 4	
369	Bennett, S.	„	12	..	0 9 0 „	7 10	2 1	9 11	
370	Ford, M.	„	12	..	0 9 0 „	7 10	1 3	9 0	
371	Clegnorn, G.	„	12	..	0 9 0 „	7 10	0 1	7 10	
372	Spora, R. A.		12	..	0 9 0 „	7 10	1 4	7 10	
373	McKenzie, A. H.	Platelayer	12	..	0 9 6 „	7 9	1 6	9 3	
374	Currie, J.	Surfaceman	12	..	0 9 0 „	7 9	..	7 9	
375	Barrett, W.	„	12	..	0 9 0 „	7 9	2 11	8 7	
376	Bumpstead, A.	„	12	..	0 9 0 „	7 9	0 7	8 4	
377	Ashby, S. G.	„	12	..	0 9 0 „	7 8	3 0	8 4	
378	Hickman, W. C.	„	12	..	0 9 0 „	7 8	0 2	7 8	
379	Sullivan, T. J.	„	12	..	0 9 0 „	7 8	0 1	7 9	
380	Busby, G. H.	„	12	..	0 9 0 „	7 8	..	7 8	
381	Jenkinson, E.	„	12	..	0 9 0 „	7 8	0 2	7 8	
382	Hill, C. H.	„	12	..	0 9 0 „	7 8	3 6	10 10	
383	Dolan, M.	„	12	..	0 9 0 „	7 8	0 8	8 4	
384	Clark, E.	„	12	..	0 9 0 „	7 8	..	7 8	
385	Brady, J.	„	12	..	0 9 0 „	7 8	0 7	8 3	
386	Ledingham, A. R.	„	12	..	0 9 0 „	7 7	0 10	8 5	
387	Cleghorn, T. W.	„	12	..	0 9 0 „	7 7	0 8	8 4	

RAILWAY DEPARTMENT CLASSIFICATION, 1913—*continued.*

SECOND DIVISION—*continued.*

Class 3 : Maintenance—continued.

Prog. No.	Name.	Classification. Designation.	Subclass.	Grade.	Rate of Pay	Service: Since last appointed.	Service: Prior to Date last appointed.	Service: For Superannuation Purposes.	Remarks.
					£ s. d.	Y. M.	Y. M.	Y. M.	
388	Lendrum, R. G.	Surfaceman	12	..	0 9 0 per diem	7 7	0 4	7 11	
389	O'Neill, L.	„	12	..	0 9 0 „	7 7	0 3	7 10	
390	Hitchcock, E. T.	„	12	..	0 9 0 „	7 7	0 5	7 7	
391	McBride, J.	„	12	..	0 9 0 „	7 7	0 8	8 2	
392	Pettigrew, R. A.	„	12	..	0 9 0 „	7 7	1 1	8 6	
393	Huston, J. A.	„	12	..	0 9 0 „	7 7	0 8	7 11	
394	Grieve, A. P.	„	12	..	0 9 0 „	7 7	0 1	7 8	
395	Halkett, W.	„	12	..	0 9 0 „	7 7	0 3	7 10	
396	Boldt, T.	„	12	..	0 9 0 „	7 7	0 8	8 2	
397	Murphy, W.	„	12	..	0 9 0 „	7 7	0 7	8 2	
398	Patterson, W. J.	„	12	..	0 9 0 „	7 7	..	7 7	
399	Kenward, C. M.	„	12	..	0 9 0 „	7 7	1 0	8 7	
400	Merewood, T.	Labourer	14	1	0 9 0 „	7 7	0 10	8 5	
401	Murphy, J.	Surfaceman	12	..	0 9 0 „	7 7	1 2	8 8	
402	Taylor, J.	„	12	..	0 9 0 „	7 6	0 5	7 11	
403	Hammond, P. A.	„	12	..	0 9 0 „	7 6	2 5	9 9	
404	Byron, A. L.	„	12	..	0 9 0 „	7 6	..	7 6	
405	Boyle, T.	„	12	..	0 9 0 „	7 6	1 11	7 6	
406	McEwen, D.	„	12	..	0 9 0 „	7 6	0 5	7 6	
407	Stalker, M. A.	„	12	..	0 9 0 „	7 6	0 8	8 2	
408	Schwass, H. W.	„	12	..	0 9 0 „	7 6	..	7 6	
409	Grave, E. L.	„	12	..	0 9 0 „	7 6	..	7 6	
410	Eaton, A.	„	12	..	0 9 0 „	7 6	0 1	7 6	
411	Franklin, L.	„	12	..	0 9 0 „	7 5	0 3	7 8	
412	Hatwell, J. M.	„	12	..	0 9 0 „	7 5	0 9	7 5	
413	Douglas, J. A.	„	12	..	0 9 6 „	7 3	..	7 3	
414	Young, R. V.	„	12	..	0 9 0 „	7 5	2 5	9 10	
415	Shields, W. P.	„	12	..	0 9 0 „	7 5	0 1	7 6	
416	McGregor, G.	„	12	..	0 9 0 „	7 5	0 2	7 6	
417	Hampton, R.	„	12	..	0 9 0 „	7 5	0 3	7 5	
418	O'Brien, W. E. A.	„	12	..	0 9 0 „	7 5	1 2	8 0	
419	Porritt, J. O.	„	12	..	0 9 0 „	7 5	0 2	7 7	
420	Malligan, J.	„	12	..	0 9 6 „	7 4	0 2	7 6	
421	Bowman, J.	„	12	..	0 9 0 „	7 4	3 4	9 9	
422	Chambers, G. A. V.	„	12	..	0 9 0 „	7 4	0 1	7 4	
423	Ryan, R.	„	12	..	0 9 0 „	7 4	..	7 4	
424	Smith, J. H.	„	12	..	0 9 0 „	7 4	..	7 4	
425	Comber, M.	„	12	..	0 9 0 „	7 3	0 2	7 5	
426	Smith, G. G.	„	12	..	0 9 0 „	7 3	0 6	7 9	
427	Jenkins, J.	„	12	..	0 9 0 „	7 3	0 3	7 6	
428	Murchie, H. B.	„	12	..	0 9 0 „	7 3	1 0	7 8	
429	Skeen, A.	„	12	..	0 9 0 „	7 3	0 3	7 6	
430	Grant, A. J.	„	12	..	0 9 0 „	7 3	0 3	7 5	
431	Shaw, F.	„	12	..	0 9 0 „	7 3	0 1	7 3	
432	Kempthorne, W. J.	„	12	..	0 9 0 „	7 3	..	7 3	
433	Bird, J.	„	12	..	0 9 0 „	7 3	2 9	10 0	
434	McPherson, R.	„	12	..	0 9 0 „	7 2	1 9	7 9	
435	Michalick, T.	„	12	..	0 9 0 „	7 2	..	7 2	
436	Ryan, J.	„	12	..	0 9 0 „	7 2	0 1	7 2	
437	Quinn, M.	„	12	..	0 9 0 „	7 2	1 10	9 0	
438	O'Connor, M.	„	12	..	0 9 0 „	7 2	1 5	8 6	
439	McGrath, P. P.	„	12	..	0 9 0 „	7 2	..	7 2	
440	Weston, A. J.	„	12	..	0 9 0 „	7 2	0 10	7 6	
441	Chapman, J.	„	12	..	0 9 0 „	7 2	0 5	7 6	
442	Edgar, A.	Platelayer	12	..	0 9 6 „	7 2	0 7	7 3	
443	Musselwhite, H. J.	Surfaceman	12	..	0 9 0 „	7 1	4 0	11 1	
444	Dempsey, J.	Platelayer	12	..	0 9 6 „	7 1	0 1	7 1	
445	Matthews, S.	Surfaceman	12	..	0 9 0 „	7 1	..	7 1	
446	Ellison, J. H.	„	12	..	0 9 0 „	7 1	0 6	7 2	
447	Claridge, A. F.	„	12	..	0 9 0 „	7 1	3 0	8 1	
448	Lee, G. H.	„	12	..	0 9 0 „	13 7	0 9	14 4	
449	Ryan, W.	„	12	..	0 9 0 „	11 7	0 2	11 9	
450	Darroch, D.	„	12	..	0 9 0 „	13 9	..	13 9	
451	Wilson, W. J.	„	12	..	0 9 0 „	7 0	1 1	8 0	
452	Regan, C.	„	12	..	0 9 0 „	7 0	0 11	7 2	
453	Madson, J. P.	Labourer	14	1	0 9 0 „	6 11	0 7	7 6	
454	McLaughlin, D.	Surfaceman	12	..	0 9 0 „	6 11	..	6 11	
455	Whittington, L.	„	12	..	0 9 0 „	6 11	0 1	6 11	
456	Loughlin, T.	Labourer	14	1	0 9 0 „	6 11	0 2	6 11	
457	Parker, J. T.	Surfaceman	12	..	0 9 0 „	6 11	1 6	8 5	
458	Jakes, W.	„	12	..	0 9 0 „	6 11	0 2	6 11	
459	Cory, M. H. G.	Labourer	14	1	0 9 0 „	6 11	0 6	7 4	
460	Ryan, E. T.	Surfaceman	12	..	0 9 0 „	6 10	2 2	9 0	
461	Hawthorne, J.	„	12	..	0 9 0 „	6 10	0 10	7 2	
462	McLay, T. B.	„	12	..	0 9 0 „	6 10	1 7	8 5	
463	Blockley, G. H.	„	12	..	0 9 0 „	6 10	1 7	8 4	
464	McGregor, W.	„	12	..	0 9 0 „	6 10	1 8	8 5	

RAILWAY DEPARTMENT CLASSIFICATION, 1913—*continued*.

SECOND DIVISION—*continued*.

Class 3: Maintenance—continued.

Prog. No.	Name.	Classification.				Service			Remarks.
		Designation.	Subclass.	Grade.	Rate of Pay	Since last appointed.	Prior to Date last appointed.	For Superannuation Purposes.	
					£ s. d.	Y. M.	Y. M.	Y. M.	
465	Parker, C. A.	Surfaceman	12	..	0 9 0 per diem	6 9	1 7	8 4	
466	Robertson, D.	„	12	..	0 9 0 „	6 9	1 4	8 1	
467	Davis, G.	„	12	..	0 9 0 „	6 9	1 3	7 7	
468	Davis, M.	„	12	..	0 9 0 „	6 9	0 6	7 3	
469	Smeath, J. H.	„	12	..	0 9 0 „	6 9	0 1	6 10	
470	Allen, J. J.	„	12	..	0 9 0 „	6 8	0 7	7 3	
471	Trillo, J. C. C.	„	12	..	0 9 0 „	6 8	0 3	6 8	
472	Bock, E. T.	„	12	..	0 9 0 „	6 7	1 2	7 8	
473	McCarthy, J.	„	12	..	0 9 0 „	6 7	2 3	7 10	
474	Stewart, D. C.	„	12	..	0 9 0 „	6 7	1 3	7 10	
475	Gilmour, H. H.	„	12	..	0 9 0 „	6 7	0 3	6 7	
476	Hills, F. W.	„	12	..	0 9 0 „	6 6	0 8	7 2	
477	Amundsen, J. S.	„	12	..	0 9 0 „	6 6	1 7	8 0	
478	Scully, J.	„	12	..	0 9 0 „	6 6	1 5	7 1	
479	Hastie, S. C.	„	12	..	0 9 0 „	6 6	0 1	6 7	
480	Long, H.	Platelayer	12	..	0 9 6 „	6 6	1 0	7 6	
481	Nixon, G. J. A.	Surfaceman	12	..	0 9 0 „	6 6	0 8	7 1	
482	Barclay, D.	„	12	..	0 9 0 „	6 6	0 4	6 6	
483	Webb, C. L.	„	12	..	0 9 0 „	6 5	0 8	6 8	
484	Aubrey, W. H.	„	12	..	0 9 0 „	6 5	0 9	6 10	
485	Roe, S.	„	12	..	0 9 0 „	6 5	..	6 5	
486	Bradley, D.	„	12	..	0 9 0 „	6 5	6 0	10 7	
487	Wilson, C.	„	12	..	0 9 0 „	6 5	1 9	8 2	
488	Gleeson, J.	„	12	..	0 9 0 „	6 5	2 2	6 9	
489	Kenny, W.	„	12	..	0 9 0 „	6 5	1 0	7 5	
490	Atley, J. J.	„	12	..	0 9 0 „	6 5	..	6 5	
491	Klempel, J.	„	12	..	0 9 0 „	6 5	0 2	6 5	
492	Perfect, T. W.	„	12	..	0 9 0 „	6 5	..	6 5	
493	McLaughlin, A. J.	„	12	..	0 9 0 „	6 5	1 11	8 4	
494	Kerr, E.	„	12	..	0 9 0 „	6 5	..	6 5	
495	Nicholls, W. H.	„	12	..	0 9 0 „	6 4	1 5	7 9	
496	Kennedy, P.	„	12	..	0 9 0 „	6 4	2 4	7 0	
497	Bamford, H. L.	„	12	..	0 9 0 „	6 4	2 3	6 5	
498	Eathorne, J. B.	„	12	..	0 9 0 „	6 4	0 4	6 4	
499	Drummond, C. S.	„	13	..	0 9 0 „	6 4	0 11	6 5	
500	Douglas, W. J.	„	12	..	0 9 0 „	6 4	0 2	6 6	
501	Amundsen, C.	„	12	..	0 9 0 „	6 4	1 9	7 3	
502	Hill, R. W.	„	12	..	0 9 0 „	6 3	1 9	8 0	
503	Collingwood, F. G.	„	12	..	0 9 0 „	6 3	1 6	7 8	
504	Harrison, T. E.	„	12	..	0 9 0 „	6 3	1 10	7 7	
505	Adamson, G. A.	Platelayer	12	..	0 9 6 „	6 3	0 4	6 7	
506	Muirhead, T. S.	Surfaceman	12	..	0 9 0 „	6 3	0 3	6 6	
507	Harper, S.	„	12	..	0 9 0 „	6 3	0 3	6 3	
508	Thomas, M. M. S.	„	12	..	0 9 0 „	6 3	..	6 3	
509	Cummock, A.	„	12	..	0 9 6 „	6 3	2 0	7 6	
510	Smith, O. J.	„	12	..	0 9 0 „	6 3	0 7	6 9	
511	Schruffer, J.	„	12	..	0 9 0 „	6 2	1 5	7 7	
512	Duncan, J. R.	„	12	..	0 9 0 „	6 2	0 11	7 1	
513	Chase, C. B.	„	12	..	0 9 0 „	6 2	1 3	7 5	
514	Hall, W.	„	12	..	0 9 0 „	6 2	1 1	7 0	
515	McMurtrie, J.	„	12	..	0 9 0 „	6 2	0 11	7 0	
516	Ross, W. H.	„	12	..	0 9 0 „	6 2	0 9	6 7	
517	Siebert, H. S.	„	12	..	0 9 0 „	6 2	2 3	7 8	
518	Paget, W. H.	„	12	..	0 9 0 „	6 2	1 6	7 4	
519	Naughton, J.	„	12	..	0 9 0 „	6 2	0 4	6 6	
520	Felix, J. E.	„	12	..	0 9 0 „	6 1	0 10	6 10	
521	Guthrie, P.	„	12	..	0 9 0 „	6 1	1 5	6 4	
522	Pinkerton, A. I.	„	12	..	0 9 0 „	6 1	1 0	6 5	
523	Clode, W.	„	12	..	0 9 0 „	6 1	0 6	6 7	
524	Twomey, J. W.	„	12	..	0 9 0 „	6 1	..	6 1	
525	Withell, R.	„	12	..	0 9 0 „	6 1	1 4	7 5	
526	Slodden, J. E.	„	12	..	0 9 0 „	6 1	0 8	6 3	
527	Phillips, O. E.	„	12	..	0 9 0 „	6 1	1 10	6 1	
528	Fraser, R. M.	„	12	..	0 9 0 „	12 5	..	12 5	
529	Hughes, G. H. J.	„	12	..	0 9 0 „	6 0	..	6 0	
530	Rush, H. G.	Labourer	14	1	0 9 0 „	6 0	0 8	6 8	
531	Cassidy, J.	Surfaceman	12	..	0 9 0 „	6 0	0 3	6 3	
532	Te Rangi, J. H.	„	12	..	0 9 0 „	6 0	0 6	6 3	
533	Fulton, W. J.	Labourer	14	1	0 9 0 „	6 0	0 9	6 0	
534	Pettit, W. H.	Surfaceman	12	..	0 9 0 „	5 11	3 7	8 7	
535	Wilkinson, G. Te P.	„	12	..	0 9 0 „	5 11	1 0	6 11	
536	Rogers, W. A.	„	12	..	0 9 0 „	5 11	0 11	6 10	
537	Daly, T. M.	„	12	..	0 9 0 „	5 11	..	5 11	
538	Harland, J. W. B.	„	12	..	0 9 0 „	5 11	0 6	6 5	
539	Smith, W. H. C.	„	12	..	0 9 0 „	5 11	0 1	6 0	
540	Magan, T. P.	„	12	..	0 9 0 „	5 11	0 11	6 10	
541	Sollitt, E.	„	12	..	0 9 0 „	5 10	0 6	5 10	

Railway Department Classification, 1913—*continued.*

SECOND DIVISION—*continued.*

Class 3: Maintenance—continued.

Prog. No.	Name.	Classification.				Service			Remarks.
		Designation.	Subclass.	Grade.	Rate of Pay.	Since last appointed.	Prior to Date last appointed.	For Superannuation Purposes.	
					£ s. d.	Y. M.	Y. M.	Y. M.	
542	Bartlett, R.	Surfaceman	12	..	0 9 0 per diem	5 10	0 1	5 11	
543	Gough, B.	"	12	..	0 9 0 "	5 10	0 1	5 11	
544	Taylor, H. D.	"	12	..	0 9 0 "	5 9	..	5 9	
545	Eccles, W. J.	"	12	..	0 9 0 "	5 9	1 3	7 0	
546	O'Brien, J. J.	"	12	..	0 9 0 "	5 9	1 2	6 8	
547	McKenzie, A.	"	12	..	0 9 0 "	5 9	0 7	6 4	
548	Lane, W. J.	"	12	..	0 9 0 "	5 9	1 6	7 3	
549	Boneham, J. W.	"	12	..	0 9 0 "	5 9	1 4	7 0	
550	Smith, J. L.	"	12	..	0 9 0 "	5 9	0 8	6 4	
551	Floyd, J.	"	12	..	0 9 0 "	5 9	0 7	5 10	
552	Skinner, C. P.	"	12	..	0 9 0 "	5 8	1 0	6 8	
553	Crawford, T.	"	12	..	0 9 0 "	5 8	1 4	5 8	
554	Pearce, F. A.	"	12	..	0 9 0 "	5 8	0 9	6 2	
555	Hamilton, J. L.	"	12	..	0 9 0 "	5 8	..	5 8	
556	Prentice, I. W.	"	12	..	0 9 0 "	5 8	1 8	5 9	
557	Ramsbottom, T.	"	12	..	0 9 0 "	5 7	0 6	5 9	
558	Lynch, J.	"	12	..	0 9 0 "	5 7	1 11	6 10	
559	Hight, J.	"	12	..	0 9 0 "	5 7	0 11	6 4	
560	Rankin, G. J.	"	12	..	0 9 0 "	5 6	4 9	10 3	
561	Bolton, W.	"	12	..	0 9 0 "	5 6	1 10	7 4	
562	Gdanitz, F.	"	12	..	0 9 0 "	5 6	1 7	7 1	
563	Harper, R. B.	"	12	..	0 9 0 "	5 6	1 5	6 10	
564	McKenzie, J.	"	12	..	0 9 0 "	5 6	1 3	6 9	
565	McLean, J.	"	12	..	0 9 0 "	5 6	1 3	6 1	
566	Tapp, R.	"	12	..	0 9 0 "	5 6	0 7	5 11	
567	Byers, D.	"	12	..	0 9 0 "	5 6	1 10	7 1	
568	Smolenski, F.	"	12	..	0 9 0 "	5 6	1 5	6 11	
569	Saunders, J.	"	12	..	0 9 0 "	5 6	1 4	6 10	
570	Mills, D. C.	"	12	..	0 9 0 "	5 6	2 0	6 10	
571	Abel, S. W. G.	"	12	..	0 9 0 "	5 6	1 0	6 6	
572	Emmerson, T.	"	12	..	0 9 0 "	5 6	0 10	6 4	
573	Boyes, J.	"	12	..	0 9 0 "	5 6	0 9	6 3	
574	Edwards, E.	Labourer	14	1	0 9 0 "	5 6	4 11	8 7	
575	Arnold, E. J.	Surfaceman	12	..	0 9 0 "	5 6	0 10	6 4	
576	Leary, T.	"	12	..	0 9 0 "	5 5	0 5	5 10	
577	Thomson, A.	"	12	..	0 9 6 "	5 5	1 2	6 7	
578	Castles, T. H.	"	12	..	0 9 0 "	5 5	1 6	6 7	
579	Cook, Richard	Platelayer	12	..	0 9 6 "	5 5	1 2	5 9	
580	Rundle, C. J.	Surfaceman	12	..	0 9 0 "	5 5	3 0	7 8	
581	Young, R.	Platelayer	12	..	0 9 6 "	5 4	3 10	9 2	
582	Ryan, P.	Surfaceman	12	..	0 9 0 "	5 4	1 9	7 1	
583	King, A. W.	"	12	..	0 9 0 "	5 4	1 3	6 2	
584	Cook, Robert	"	12	..	0 9 0 "	5 4	0 2	5 6	
585	Cook, Robert (Hokitika)	"	12	..	0 9 0 "	5 4	0 10	6 1	
586	Woodruffe, A.	"	12	..	0 9 0 "	5 4	0 9	5 9	
587	Thessman, A. W.	Platelayer	12	..	0 9 6 "	5 4	4 2	5 10	
588	Dwan, M. W.	Surfaceman	12	..	0 9 0 "	5 4	0 6	5 5	
589	Saunders, F. C.	"	12	..	0 9 0 "	5 3	1 2	6 5	
590	Barrott, J.	"	12	..	0 9 6 "	5 3	..	5 3	
591	Schwass, F. A.	"	12	..	0 9 0 "	5 3	..	5 3	
592	Miller, G.	"	12	..	0 9 0 "	5 3	0 5	5 8	
593	King, F. J.	"	12	..	0 9 0 "	5 3	0 4	5 6	
594	Irving, A. E.	"	12	..	0 9 0 "	5 3	0 1	5 4	
595	Grimwood, J. A.	"	12	..	0 9 0 "	5 3	6 11	8 3	
596	Woodward, T.	Surfaceman-miner	12	..	0 9 6 "	5 2	..	5 2	
597	Cotton, T.	Surfaceman	12	..	0 9 0 "	5 2	1 0	6 1	
598	Goodhue, L. E.	"	12	..	0 9 0 "	5 2	1 0	5 5	
599	Ryan, W. M.	"	12	..	0 9 0 "	5 2	0 7	5 4	
600	Jenkin, J.	"	12	..	0 9 0 "	5 2	..	5 2	
601	Alomes, A. L.	"	12	..	0 9 0 "	5 2	..	5 2	
602	Hughes, E. J.	"	12	..	0 9 0 "	5 1	0 3	5 4	
603	Dallimore, T. J.	"	12	..	0 9 0 "	5 1	0 5	5 6	
604	Riley, C.	"	12	..	0 9 0 "	5 1	0 3	5 1	
605	Webber, J.	"	12	..	0 9 0 "	5 1	0 5	5 6	
606	O'Grady, J.	"	12	..	0 9 0 "	5 1	1 11	5 3	
607	Fahey, J.	"	12	..	0 9 0 "	5 1	1 1	5 5	
608	Galbraith, J. A.	"	12	..	0 9 0 "	5 1	0 7	5 3	
609	Argus, E. E.	"	12	..	0 9 0 "	5 1	4 6	9 7	
610	Hooper, A. G.	"	12	..	0 9 0 "	5 1	0 5	5 3	
611	Culloty, M.	"	12	..	0 9 0 "	5 0	0 1	5 1	
612	Loader, A.	"	12	..	0 9 0 "	5 0	0 2	5 2	
613	Downes, T. S.	"	12	..	0 9 0 "	9 9	..	9 9	
614	Morris, A.	"	12	..	0 9 0 "	9 7	..	9 7	
615	Puttick, G.	"	12	..	0 9 0 "	9 7	..	9 7	
616	Friel, J.	"	12	..	0 9 0 "	5 0	0 1	5 0	
617	Ryan, J.	"	12	..	0 9 0 "	5 0	..	5 0	
618	Thwaites, W.	"	12	..	0 9 0 "	5 0	..	5 0	

RAILWAY DEPARTMENT CLASSIFICATION, 1913—*continued.*

SECOND DIVISION—*continued.*

Class 3: Maintenance—continued.

Prog. No.	Name.	Classification.							Service			Remarks.
		Designation.	Subclass.	Grade.	Rate of Pay.				Since last appointed.	Prior to Date last appointed.	For Superannuation Purposes.	
					£	s.	d.		Y. M.	Y. M.	Y. M.	
619	McKenzie, A.	Surfaceman	12	..	0	9	0	per diem	5 0	1 2	6 2	
620	Brown, A. H.	„	12	..	0	9	0	„	5 0	1 3	6 3	
621	Bradley, M.	„	12	..	0	9	0	„	5 0	1 1	6 0	
622	Quirk, T.	„	12	..	0	9	0	„	5 0	1 2	6 0	
623	Taylor, R.	„	12	..	0	9	0	„	5 0	1 7	5 11	
624	Park, J.	„	12	..	0	9	0	„	5 0	0 11	5 11	
625	Glennie, A.	„	12	..	0	9	0	„	5 0	0 9	5 9	
626	McBride, A.	Platelayer	12	..	0	9	6	„	5 0	0 11	5 4	
627	McCrystal, H.	Surfaceman	12	..	0	9	0	„	4 11	0 9	5 8	
628	Burgess, W. W.	„	12	..	0	9	0	„	4 11	0 7	4 11	
629	Jamieson, W. C.	„	12	..	0	9	0	„	4 11	1 2	6 0	
630	Uren, W. J. H.	„	12	..	0	9	0	„	4 11	0 5	4 11	
631	Main, J. S.	„	12	..	0	9	0	„	4 11	0 11	5 10	
632	Gregory, G. J.	„	12	..	0	9	0	„	4 11	2 8	7 1	
633	Wallace, J. H.	„	12	..	0	9	0	„	4 11	..	4 11	
634	Turner, C. W.	„	12	..	0	9	0	„	4 11	1 0	5 11	
635	Taylor, J.	„	12	..	0	9	0	„	4 11	1 7	5 10	
636	Evans, E. F.	„	12	..	0	9	0	„	4 10	0 2	5 0	
637	Kenworthy, R.	„	12	..	0	9	0	„	4 10	0 1	4 10	
638	Kelly, J. R.	„	12	..	0	9	0	„	4 10	1 5	5 3	
639	Cooper, J. H.	„	12	..	0	9	0	„	4 10	1 1	5 11	
640	Grant, J.	„	12	..	0	9	0	„	4 10	0 10	5 8	
641	Brewer, H. R.	„	12	..	0	9	0	„	4 10	0 6	5 4	
642	Tremewan, J. P.	„	12	..	0	9	0	„	4 10	0 7	5 5	
643	Smith, A.	„	12	..	0	9	0	„	4 10	0 7	5 1	
644	Crowley, J.	„	12	..	0	9	0	„	4 10	..	4 10	
645	Collins, J.	„	12	..	0	9	0	„	4 10	0 7	5 3	
646	O'Dea, S.	„	12	..	0	9	0	„	4 10	0 2	5 0	
647	Woodbury, M. C.	„	12	..	0	9	0	„	4 10	0 3	5 0	
648	Mair, G. L.	„	12	..	0	9	0	„	4 9	10 6	4 11	
649	Gavan, P. B.	„	12	..	0	9	0	„	4 9	0 7	5 4	
650	Climo, R. F. J.	„	12	..	0	9	0	„	4 9	0 6	5 3	
651	Brew, C. A.	„	12	..	0	9	0	„	4 9	0 4	5 1	
652	Fitzsimons, E.	„	12	..	0	9	0	„	4 9	0 6	5 1	
653	Timmins, M.	„	12	..	0	9	0	„	4 8	3 1	6 5	
654	O'Sullivan, C. P.	„	12	..	0	9	0	„	4 8	0 6	5 2	
655	Beaurepaire, L. I.	„	12	..	0	9	0	„	4 8	2 4	6 9	
656	Bennett, J. W.	„	12	..	0	9	0	„	4 8	1 7	6 2	
657	Morison, A. J.	„	12	..	0	9	0	„	4 8	1 3	5 11	
658	McDougall, W.	„	12	..	0	9	0	„	4 7	1 9	5 8	
659	Farrow, G. F.	„	12	..	0	9	0	„	4 7	0 7	5 2	
660	McDonald, H.	„	12	..	0	9	0	„	4 7	0 7	5 2	
661	Read, G.	„	12	..	0	9	0	„	4 7	0 1	4 8	
662	Morris, A. W.	„	12	..	0	9	0	„	4 7	..	4 7	
663	Baxter, M.	„	12	..	0	9	0	„	4 7	0 1	4 8	
664	Hill, H. E.	„	12	..	0	9	0	„	4 7	3 3	5 7	
665	Gray, W. L.	„	12	..	0	9	0	„	4 7	0 11	5 6	
666	Dumbleton, W.	„	12	..	0	9	0	„	4 7	0 8	5 3	
667	Woodcock, J. W.	„	12	..	0	9	0	„	4 7	0 2	4 9	
668	Dalton, J. H.	„	12	..	0	9	0	„	4 7	..	4 7	
669	Franklyn, H. W. F.	„	12	..	0	9	0	„	4 7	..	4 7	
670	Thomas, D. S.	„	12	..	0	9	0	„	4 7	1 3	5 4	
671	Sullivan, M.	„	12	..	0	9	0	„	4 7	0 6	5 1	
672	McLean, R.	„	12	..	0	9	0	„	4 7	0 2	4 9	
673	Chant, S.	„	12	..	0	9	0	„	4 6	0 6	5 0	
674	Dasler, T.	„	12	..	0	9	0	„	4 6	1 4	5 5	
675	Johnston, G. W.	„	12	..	0	9	0	„	4 6	0 8	5 4	
676	Williams, J.	„	12	..	0	9	0	„	4 6	0 9	5 3	
677	Curran, T.	„	12	..	0	9	0	„	4 6	0 9	5 3	
678	Gillard, N. W.	„	12	..	0	9	0	„	4 6	1 0	5 1	
679	Walker, A. G.	„	12	..	0	9	0	„	4 6	..	4 6	
680	Dickin, A.	„	12	..	0	9	0	„	4 6	0 5	4 11	
681	Robson, T.	„	12	..	0	9	0	„	4 6	2 0	6 6	
682	Wright, J. P.	„	12	..	0	9	0	„	4 6	1 6	5 7	
683	White, T. A.	„	12	..	0	9	0	„	4 6	1 1	4 6	
684	Healey, N.	„	12	..	0	9	0	„	4 6	0 10	5 4	
685	Wilson, G. W.	„	12	..	0	9	0	„	4 6	2 2	6 8	
686	Condon, W.	„	12	..	0	9	0	„	4 6	0 8	5 2	
687	Walsh, J.	„	12	..	0	9	0	„	4 6	0 5	4 11	
688	Field, R.	„	12	..	0	9	0	„	4 6	0 3	4 9	
689	McCutcheon, T. J.	„	12	..	0	9	0	„	4 6	..	4 6	
690	Flannery, J.	„	12	..	0	9	0	„	4 5	0 6	4 11	
691	Laughton, P.	„	12	..	0	9	0	„	4 5	1 9	4 11	
692	McLeod, D. M.	„	12	..	0	9	0	„	4 5	0 7	4 5	
693	Croskery, H.	„	12	..	0	9	0	„	4 5	1 0	4 7	
694	McAsey, A. J.	„	12	..	0	9	0	„	4 5	0 5	4 6	
695	Thompson, A. S.	„	12	..	0	9	0	„	4 5	..	4 5	

RAILWAY DEPARTMENT CLASSIFICATION, 1913—*continued.*

Prog. No.	Name.	Classification.				Service			Remarks
		Designation.	Subclass.	Grade.	Rate of Pay.	Since last appointed.	Prior to Date last appointed.	For Superannuation Purposes.	
		SECOND DIVISION—*continued.* *Class 3: Maintenance*—continued.							
					£ s. d.	Y. M.	Y. M.	Y. M.	
696	Prendergast, J. J.	Surfaceman	12	..	0 9 0 per diem	4 5	2 9	5 8	
697	Summers, W.	„	12	..	0 9 0 „	4 5	0 6	4 11	
698	Henskie, F. A.	„	12	..	0 9 0 „	4 5	0 4	4 9	
699	Foster, W.	„	12	..	0 9 0 „	4 4	1 6	5 10	
700	Giles, A. H.	„	12	..	0 9 0 „	4 4	..	4 4	
701	Richardson, A. G.	„	12	..	0 9 0 „	4 4	0 6	4 10	
702	Kelly, D.	„	12	..	0 9 0 „	4 4	1 1	5 5	
703	McDowell, W. T.	„	12	..	0 9 0 „	4 4	0 11	5 3	
704	Prendergast, R.	„	12	..	0 9 0 „	4 4	1 0	5 4	
705	Campbell, A.	„	12	..	0 9 0 „	4 4	0 10	5 2	
706	Newman, H.	„	12	..	0 9 0 „	4 4	0 6	4 10	
707	Lowe, J. E.	„	12	..	0 9 0 „	4 4	0 8	4 7	
708	Pedder, R. J.	„	12	..	0 9 0 „	4 4	..	4 4	
709	Verner, T. F.	„	12	..	0 9 0 „	4 4	1 3	5 7	
710	Hopkinson, A.	„	12	..	0 9 0 „	4 4	1 2	5 6	
711	Connors, P.	„	12	..	0 9 0 „	4 4	0 10	4 10	
712	Duffy, P.	Labourer	14	1	0 9 0 „	4 4	1 2	5 6	
713	Couch, R.	Surfaceman	12	..	0 9 0 „	4 4	23 6	27 10	
714	Farley, M.	„	12	..	0 9 0 „	4 4	23 3	27 7	
715	Hehir, J.	Fencer	13	..	0 9 0 „	4 4	22 8	27 0	
716	Kelleher, C.	Surfaceman	12	..	0 9 0 „	4 4	22 0	26 4	
717	Sullivan, P.	„	12	..	0 9 0 „	4 4	18 10	23 2	
718	Reidy, T.	„	12	..	0 9 0 „	4 4	15 4	19 8	
719	Mulhane, W.	„	12	..	0 9 0 „	4 4	11 11	16 3	
720	Brett, D.	„	12	..	0 9 0 „	4 4	7 7	11 11	
721	Fitzgerald, M.	„	12	..	0 9 0 „	4 4	6 3	10 7	
722	Gregory, A.	„	12	..	0 9 0 „	4 4	5 11	10 3	
723	Rees, W. J.	„	12	..	0 9 0 „	4 4	5 11	10 3	
724	Curry, P.	„	12	..	0 9 0 „	4 4	4 11	9 3	
725	Scott, J. C.	„	12	..	0 9 0 „	4 4	4 10	9 2	
726	Herlihy, D.	„	12	..	0 9 0 „	4 4	4 8	9 0	
727	Diamond, F.	„	12	..	0 9 0 „	4 4	2 11	7 3	
728	Hasse, H. R.	„	12	..	0 9 0 „	4 4	2 4	6 8	
729	Day, J.	„	12	..	0 9 0 „	4 4	2 2	6 6	
730	Thomson, A.	„	12	..	0 9 0 „	4 4	1 8	6 0	
731	Gaskin, L. M.	„	12	..	0 9 0 „	4 4	1 7	5 11	
732	Westaway, W. W.	„	12	..	0 9 0 „	4 4	1 6	5 10	
733	Edwards, H.	„	12	..	0 9 0 „	4 4	1 6	5 10	
734	Melton, R.	„	12	..	0 9 0 „	4 4	1 4	5 8	
735	Ashby, J.	Labourer	14	1	0 9 0 „	4 4	1 3	5 7	
736	Adams, J.	Surfaceman	12	..	0 9 0 „	4 4	1 1	5 5	
737	Dredge, W.	Labourer	14	1	0 9 0 „	4 4	1 11	6 3	
738	Evans, A.	Surfaceman	12	..	0 9 0 „	4 4	1 8	6 0	
739	McDonald, G.	„	12	..	0 9 0 „	4 4	1 10	6 2	
740	Kennedy, P.	Fencer	13	..	0 9 0 „	4 4	1 8	6 0	
741	Wilson, A.	Surfaceman	12	..	0 9 0 „	4 4	0 10	5 2	
742	Ward, A.	„	12	..	0 9 0 „	4 4	0 6	4 10	
743	Isherwood, E.	„	12	..	0 9 0 „	4 4	0 1	4 4	
744	O'Keeffe, A.	„	12	..	0 9 0 „	4 4	0 2	4 5	
745	Davis, W. S.	„	12	..	0 9 0 „	4 4	..	4 4	
746	Murphy, J.	„	12	..	0 9 0 „	4 3	1 5	5 8	
747	Smith, G.	„	12	..	0 9 0 „	4 3	0 8	4 11	
748	Merry, H. A.	„	12	..	0 9 0 „	4 3	0 2	4 5	
749	Hewlett, H. G.	„	12	..	0 9 0 „	4 3	0 1	4 4	
750	Hughes, W. J.	„	12	..	0 9 0 „	4 3	1 2	5 5	
751	Fahey, E. W.	„	12	..	0 9 0 „	4 3	0 11	5 2	
752	Peters, H. A.	„	12	..	0 9 0 „	4 3	0 1	4 4	
753	Connolly, J. R.	„	12	..	0 9 0 „	4 3	0 6	4 3	
754	King, A. H.	„	12	..	0 9 0 „	4 3	0 8	4 3	
755	Lawson, J. D.	„	12	..	0 9 0 „	4 3	0 3	4 3	
756	Morris, J.	„	12	..	0 9 0 „	4 3	3 3	7 4	
757	Knofflock, F. A.	„	12	..	0 9 0 „	4 2	0 1	4 3	
758	Dore, E. T.	„	12	..	0 9 0 „	4 2	1 6	5 8	
759	Dwight, S. J.	„	12	..	0 9 0 „	4 2	0 8	4 10	
760	Smith, A. E.	„	12	..	0 9 0 „	4 2	0 1	4 3	
761	Noonan, J.	„	12	..	0 9 0 „	4 2	0 5	4 2	
762	Johnston, J.	„	12	..	0 9 0 „	4 2	..	4 2	
763	Murray, J. F.	„	12	..	0 9 0 „	4 2	0 3	4 5	
764	Hunter, G.	„	12	..	0 9 0 „	4 1	0 3	4 4	
765	Dawson, A.	„	12	..	0 9 0 „	4 1	0 4	4 5	
766	Donald, W. G.	„	12	..	0 9 0 „	4 1	0 8	4 9	
767	McGill, J.	„	12	..	0 9 0 „	4 1	0 11	5 0	
768	Mitchell, A.	„	12	..	0 9 0 „	4 1	..	4 1	
769	Courtney, W. H.	„	12	..	0 9 0 „	4 1	0 5	4 3	
770	Benson, A. J.	„	12	..	0 9 0 „	4 1	0 11	5 0	
771	Williamson, H.	Platelayer	12	..	0 9 6 „	4 1	0 7	4 2	
772	Bassett, J. J.	Surfaceman	12	..	0 9 0 „	4 1	0 1	4 2	

RAILWAY DEPARTMENT CLASSIFICATION, 1913—*continued.*

Prog. No.	Name.	Classification.				Service			Remarks
		Designation.	Subclass.	Grade.	Rate of Pay	Since last appointed.	Prior to Date last appointed.	For Superannuation Purposes.	
		SECOND DIVISION—*continued.* *Class 3: Maintenance*—continued.							
					£ s. d.	Y. M.	Y. M.	Y. M.	
773	Lacon, F. R.	Surfaceman	12	..	0 9 0 per diem	4 1	0 2	4 3	
774	Hansmann, J. H.	„	12	..	0 9 0 „	4 1	0 2	4 3	
775	Philp, H.	„	12	..	0 9 6 „	4 1	0 1	4 2	
776	Wiechern, H. O. A.	„	12	..	0 9 0 „	4 1	0 3	4 4	
777	Pluck, A. W.	„	12	..	0 9 0 „	4 1	..	4 1	
778	Sim, J.	„	12	..	0 9 0 „	4 1	0 6	4 7	
779	Patterson, J. S.	„	12	..	0 9 0 „	4 1	1 1	4 2	
780	O'Connor, J.	„	12	..	0 9 0 „	4 1	0 4	4 1	
781	Terry, S. E.	„	12	..	0 9 0 „	4 1	0 10	4 1	
782	Ruth, C. J.	„	12	..	0 9 0 „	4 0	2 0	4 5	
783	Hopwood, W.	„	12	..	0 9 0 „	4 0	..	4 0	
784	Ward, W. J.	„	12	..	0 9 0 „	4 0	0 1	4 0	
785	McLean, W. J.	„	12	..	0 9 0 „	4 0	..	4 0	
786	Hunt, G. H.	„	12	..	0 9 6 „	4 0	0 1	4 1	
787	Dermott, W.	„	12	..	0 9 0 „	4 0	..	4 0	
788	Bailey, A.	„	12	..	0 9 0 „	8 11	..	8 11	
789	Holland, J. J.	„	12	..	0 9 0 „	8 11	..	8 11	
790	Moreland, A.	„	12	..	0 9 0 „	8 2	..	8 2	
791	Fahey, J.	„	12	..	0 9 0 „	4 0	0 9	4 7	
792	Woodward, J. H.	„	12	..	0 9 0 „	4 0	4 1	6 8	
793	Muir, A. F.	„	12	..	0 9 0 „	4 0	0 9	4 0	
794	Foss, A.	„	12	..	0 9 0 „	4 0	0 5	4 5	
795	Maxwell, Albert H.	„	12	..	0 9 0 „	4 0	0 2	4 2	
796	Moody, T. W.	„	12	..	0 9 0 „	4 0	0 1	4 1	
797	Stewart, F. W.	„	12	..	0 9 0 „	4 0	6 1	5 2	
798	Dwight, P. H.	„	12	..	0 9 0 „	4 0	0 9	4 9	
799	Eatwell, R. H.	„	12	..	0 9 0 „	3 11	0 1	4 0	
800	Brock, J. R.	„	12	..	0 9 0 „	3 11	0 4	4 3	
801	Eastwell, J.	„	12	..	0 9 0 „	3 11	3 6	4 1	
802	Sherlock, W.	„	12	..	0 9 0 „	3 11	0 7	3 11	
803	Stringer, H. W.	„	12	..	0 9 0 „	3 11	1 7	5 6	
804	Davison, G.	„	12	..	0 9 0 „	3 11	0 3	4 2	
805	Doidge, H. B.	„	12	..	0 9 0 „	3 11	..	3 11	
806	Spalding, A. D.	Labourer	14	1	0 9 0 „	3 10	3 0	4 4	
807	Sheehan, J.	Surfaceman	12	..	0 9 0 „	3 10	0 2	4 0	
808	Aberley, J. C.	„	12	..	0 9 0 „	3 10	..	3 10	
809	Palmer, R. H.	„	12	..	0 9 0 „	3 10	0 3	3 10	
810	Corbishley, J.	„	12	..	0 9 0 „	3 10	1 0	4 10	
811	Adams, T. J.	„	12	..	0 9 0 „	3 10	0 2	3 11	
812	Boyce, F.	Platelayer	12	..	0 9 6 „	3 10	4 5	8 0	
813	Gread, F. W. J.	Surfaceman	12	..	0 9 0 „	3 10	0 3	4 0	
814	Brears, H.	„	12	..	0 9 0 „	3 10	0 2	3 10	
815	McDonald, S.	„	12	..	0 9 0 „	3 10	0 2	3 10	
816	Keogh, M.	„	12	..	0 9 0 „	3 10	0 6	3 11	
817	Adamson, D. J. R.	„	12	..	0 9 0 „	3 10	1 2	5 0	
818	Barnicle, H. B.	„	12	..	0 9 0 „	3 10	0 3	3 10	
819	Andrews, G. J.	„	12	..	0 9 0 „	3 10	0 11	3 10	
820	O'Grady, F.	„	12	..	0 9 0 „	3 9	2 1	5 10	
821	Horn, C. J.	„	12	..	0 9 0 „	3 9	0 4	4 1	
822	Brown, E. O.	„	12	..	0 9 0 „	3 9	0 3	4 0	
823	Fitzgerald, H. P.	„	12	..	0 9 0 „	3 9	0 3	4 0	
824	Hartnett, J. E.	Platelayer	12	..	0 9 6 „	3 9	4 5	3 11	
825	Gasson, P. W.	Surfaceman	12	..	0 9 0 „	3 9	0 2	3 11	
826	Willis, J.	„	12	..	0 9 0 „	3 9	..	3 9	
827	Smith, C.	„	12	..	0 9 0 „	3 9	0 2	3 9	
828	Mallett, T.	„	12	..	0 9 0 „	3 9	0 2	3 9	
829	Cliff, T.	„	12	..	0 9 0 „	3 9	0 3	3 9	
830	Twomey, P. M.	Labourer	14	1	0 9 0 „	3 8	1 7	4 7	
831	Crozier, R. F.	Surfaceman	12	..	0 9 0 „	3 8	2 7	6 3	
832	Kennedy, C. E.	„	12	..	0 9 0 „	3 8	0 3	3 11	
833	Colhoun, J.	„	12	..	0 9 0 „	3 8	..	3 8	
834	Shilling, J. A.	„	12	..	0 9 0 „	3 8	0 5	4 1	
835	Fahey, W.	Labourer	14	1	0 9 0 „	3 8	0 3	3 11	
836	Sutherland, D. S. W.	Surfaceman	12	..	0 9 0 „	3 8	0 8	3 8	
837	Grady, J.	„	12	..	0 9 0 „	3 8	1 6	5 1	
858	McDonald, G. N.	„	12	..	0 9 0 „	3 8	0 3	3 11	
839	Bishop, S.	„	12	..	0 9 0 „	3 7	0 3	3 10	
840	Payne, H. L.	„	12	..	0 9 0 „	3 7	0 3	3 10	
841	McNaughton, P. P.	„	12	..	0 9 0 „	3 7	0 3	3 10	
842	Sullivan, C. P.	„	12	..	0 9 0 „	3 7	0 3	3 7	
843	Connell, D.	„	12	..	0 9 0 „	3 7	1 0	4 7	
844	Judd, G. J.	„	12	..	0 9 0 „	3 7	0 10	4 4	
845	Cook, C.	Platelayer	12	..	0 9 6 „	3 7	3 4	6 5	
846	Hart, W. T.	Surfaceman	12	..	0 9 0 „	3 7	..	3 7	
847	Calvert, G.	„	12	..	0 9 0 „	3 7	0 8	3 7	
848	Benson, T. J.	„	12	..	0 9 6 „	3 6	0 5	3 11	
849	Pollock, T.	„	12	..	0 9 0 „	3 6	2 5	5 11	

RAILWAY DEPARTMENT CLASSIFICATION, 1913—*continued.*

Prog. No.	Name.	Classification.				Service			Remarks.
		Designation.	Subclass.	Grade.	Rate of Pay	Since last appointed.	Prior to Date last appointed.	For Superannuation Purposes.	
					£ s. d.	Y. M.	Y. M.	Y. M.	
		SECOND DIVISION—*continued.* *Class 3: Maintenance*—continued.							
850	Bone, G. H.	Surfaceman	12	..	0 9 0 per diem	3 6	0 9	4 3	
851	Sanders, A. E.	„	12	..	0 9 0 „	3 6	0 6	3 11	
852	Boyer, R. S.	„	12	..	0 9 0 „	3 6	0 4	3 10	
853	Garthwaite, F.	„	12	..	0 9 0 „	3 6	0 3	3 9	
854	Breayley, A. T.	„	12	..	0 9 0 „	3 6	0 2	3 8	
855	Gleeson, M.	„	12	..	0 9 0 „	3 6	0 3	3 7	
856	McEwen, D. F. C.	„	12	..	0 9 0 „	3 6	0 2	3 7	
857	McSweeney, W. H. F.	„	12	..	0 9 0 „	3 6	..	3 6	
858	Grierson, W. J.	„	12	..	0 9 0 „	3 6	2 0	5 6	
859	Tomlinson, J.	„	12	..	0 9 0 „	3 6	0 7	4 0	
860	Rippon, A. C. E.	„	12	..	0 9 0 „	3 6	1 5	4 6	
861	Davey, E. C.	„	12	..	0 9 0 „	3 6	3 2	6 8	
862	Senne, M. H.	„	12	..	0 9 0 „	3 6	0 1	3 7	
863	Scanlan, D.	„	12	..	0 9 0 „	3 5	2 1	5 6	
864	Lay, G. H.	„	12	..	0 9 0 „	3 5	0 10	4 3	
865	Fleming, P.	„	12	..	0 9 0 „	3 5	0 4	3 9	
896	Brown, W.	„	12	..	0 9 0 „	3 5	0 1	3 6	
867	Andrews, A. F.	„	12	..	0 9 0 „	3 5	0 5	3 5	
868	Devine, J.	„	12	..	0 9 0 „	3 5	1 0	3 10	
869	Sheahan, J.	„	12	..	0 9 0 „	3 5	0 9	4 2	
870	Barnes, H.	„	12	..	0 9 0 „	3 5	0 2	3 5	
871	Barron, J. W.	„	12	..	0 9 0 „	3 5	0 2	3 7	
872	Budd, F. C.	„	12	..	0 9 0 „	3 5	0 9	3 5	
873	Stancombe, R. E.	„	12	..	0 9 0 „	3 5	1 6	4 11	
874	Wilson, T.	„	12	..	0 9 0 „	3 5	0 9	4 2	
875	Steer, R. G.	„	12	..	0 9 0 „	3 4	0 2	3 6	
876	O'Donnell, M.	Platelayer	12	..	0 9 6 „	3 4	0 6	3 10	
877	Flyger, N. C.	Surfaceman	12	..	0 9 0 „	3 4	0 6	3 6	
878	Hilliard, R. W.	„	12	..	0 9 0 „	3 4	..	3 4	
879	Wooldridge, E.	Labourer	14	1	0 9 0 „	3 4	0 11	4 3	
880	Collins, T. F.	Surfaceman	12	..	0 9 0 „	3 4	0 8	4 0	
881	Cleaver, W. E.	„	12	..	0 9 0 „	3 4	1 3	3 4	
882	McLennan, K.	„	12	..	0 9 0 „	3 4	1 9	5 1	
883	Alexander, R. W.	„	12	..	0 9 0 „	3 4	..	3 4	
884	Sheahon, T. W.	„	12	..	0 9 0 „	3 4	..	3 4	
885	Burnside, H. D. C.	Labourer	14	1	0 9 0 „	3 3	7 1	10 4	
886	Pink, A. H.	Surfaceman	12	..	0 9 0 „	3 3	0 3	3 6	
887	Lamb, D. W.	„	12	..	0 9 0 „	3 3	1 1	3 4	
888	Armstrong, W. I.	„	12	..	0 9 0 „	3 3	0 4	3 7	
889	Jericevich, D.	„	12	..	0 9 0 „	3 3	0 10	3 10	
890	Bennett, C. F.	„	12	..	0 9 0 „	3 3	0 3	3 6	
891	Clark, W. D.	„	12	..	0 9 0 „	3 3	0 3	3 6	
892	Challis, C. E.	„	12	..	0 9 0 „	3 3	0 1	3 4	
893	Thorne, A. J.	„	12	..	0 9 0 „	3 3	..	3 3	
894	Coutts, F.	„	12	..	0 9 0 „	3 2	1 5	3 2	
895	Sammons, V. E.	Labourer	14	1	0 9 0 „	3 2	3 6	4 3	
896	Floyd, F.	Surfaceman	12	..	0 9 0 „	3 2	2 9	5 11	
897	Blakely, J. R.	„	12	..	0 9 0 „	3 2	0 2	3 4	
898	Jackson, S.	„	12	..	0 9 6 „	3 2	1 9	4 9	
899	Bland, A.	„	12	..	0 9 0 „	3 2	3 9	3 2	
900	Foley, W.	„	12	..	0 9 6 „	3 2	0 3	3 5	
901	Couperthwaite, P.	„	12	..	0 9 0 „	3 2	0 2	3 4	
902	Wright, P.	„	12	..	0 9 0 „	3 2	0 2	3 4	
903	Snow, J. H.	„	12	..	0 9 0 „	3 2	0 1	3 3	
904	Reed, A. E.	„	12	..	0 9 0 „	3 1	0 8	3 1	
905	Condon, T.	„	12	..	0 9 0	3 1	1 3	4 4	
906	Carr, A. B.	„	12	..	0 9 0 „	3 1	0 2	3 3	
907	Hinsley, F. H.	„	12	..	0 9 0 „	3 1	0 6	3 7	
908	Keegan, V. N.	„	12	..	0 9 0 „	3 1	0 2	3 2	
909	Tempero, C. J.		12	..	0 9 0 „	3 1	2 11	4 10	
910	Wonnacott, F.	„	12	..	0 9 0 „	7 9	..	7 9	
911	Sloan, W. J.	„	12	..	0 9 0 „	7 3	..	7 3	
912	Gilbert, G. G.	„	12	..	0 9 0 „	7 0	..	7 0	
913	Tanner, D.	„	12	..	0 9 0 „	3 0	0 1	3 1	
914	Costello, M.	„	12	..	0 9 0 „	3 0	0 3	3 3	
915	Turner, A.	„	12	..	0 9 0 „	3 0	0 3	3 3	
916	Laredo, F.	„	12	..	0 9 0 „	3 0	1 3	3 1	
917	Walters, C. J.	„	12	..	0 9 0 „	2 11	1 10	2 11	
918	Gaffney, T.	„	12	..	0 9 0 „	2 11	0 10	3 5	
919	Paddy, G.	„	12	..	0 9 0 „	2 11	3 8	4 10	
920	Harrison, S.	„	12	..	0 9 0 „	2 11	0 6	3 5	
921	Tonkin, D.	„	12	..	0 9 0 „	2 11	0 3	3 2	
922	Dwyer, M.	„	12	..	0 9 0 „	2 11	0 4	3 3	
923	Young, G. A.	„	12	..	0 9 0 „	2 11	0 3	3 2	
924	Hayes, J.	Platelayer	12	..	0 9 6 „	2 11	0 3	3 2	
925	Levien, A. H.	Surfaceman	12	..	0 9 0 „	2 11	0 5	3 4	
926	Foale, C. J.	„	12	..	0 9 0 „	2 11	0 6	3 4	

RAILWAY DEPARTMENT CLASSIFICATION, 1913—*continued.*

SECOND DIVISION—*continued.*

Class 3: Maintenance—continued.

Prog. No.	Name.	Classification.				Service			Remarks.
		Designation.	Subclass.	Grade.	Rate of Pay.	Since last appointed.	Prior to Date last appointed.	For Superannuation Purposes.	
					£ s. d.	Y. M.	Y. M.	Y. M.	
927	Mills, H.	Surfaceman	12	..	0 9 0 per diem	2 11	1 3	2 11	
928	Gallagher, J.	Labourer	14	1	0 9 0 „	2 11	3 9	6 8	
929	Merry, W. E. F.	Surfaceman	12	..	0 9 0 „	2 11	0 1	2 11	
930	Burbery, A.	„	12	..	0 9 0 „	2 10	..	2 10	
931	Cotter, T.	„	12	..	0 9 0 „	2 10	0 2	3 0	
932	Barron, J.	„	12	..	0 9 0 „	2 10	0 2	3 0	
933	Ross, J.	„	12	..	0 9 0 „	2 10	0 2	2 11	
934	Lardner, T.	„	12	..	0 9 0 „	2 9	2 2	4 11	
935	Earsman, W.	„	12	..	0 9 0 „	2 9	1 3	4 0	
936	King, I.	„	12	..	0 9 0 „	2 9	1 9	4 0	
937	Osborne, E. T.	„	12	..	0 9 0 „	2 9	1 10	3 6	
938	Phillips, J. M.	„	12	..	0 9 0 „	2 9	0 4	3 1	
939	Orlowski, L.	„	12	..	0 9 0 „	2 9	0 2	2 11	
940	Mayo, C. E.	„	12	..	0 9 0 „	2 9	..	2 9	
941	Edge, W. G.	„	12	..	0 9 0 „	2 9	2 5	5 2	
942	Gillatt, W.	„	12	..	0 9 0 „	2 9	0 6	3 3	
943	Kirk, W. H.	„	12	..	0 9 0 „	2 9	0 4	3 1	
944	Granville, H. H.	„	12	..	0 9 0 „	2 9	1 1	2 9	
945	Lynch, M.	„	12	..	0 9 0 „	2 9	0 4	2 9	
946	Durbridge, E. W.	„	12	..	0 9 0 „	2 9	..	2 9	
947	Rice, M. T.	„	12	..	0 9 0 „	2 8	0 3	2 11	
948	Sefton, W. C.	„	12	..	0 9 0 „	2 8	1 4	4 0	
949	Joyce, J.	„	12	..	0 9 0 „	2 8	4 1	6 9	
950	Crossen, J. J.	„	12	..	0 9 0 „	2 8	1 10	2 8	
951	Lee, J.	„	12	..	0 9 0 „	2 8	0 9	3 0	
952	Cliff, R.	„	12	..	0 9 0 „	2 8	0 3	2 11	
953	Mason, C. H.	„	12	..	0 9 0 „	2 8	2 1	3 11	
954	Bone, F. W.	„	12	..	0 9 0 „	2 7	0 1	2 8	
955	Harper, J.	Labourer	14	1	0 9 0 „	2 7	4 3	6 10	
956	Davies, H.	Surfaceman	12	..	0 9 0 „	2 7	..	2 7	
957	Bains, A.	„	12	..	0 9 0 „	2 7	0 7	2 7	
958	McEwen, A.	„	12	..	0 9 0 „	2 7	0 7	2 10	
959	Schischka, W.	„	12	..	0 9 0 „	2 7	1 6	4 1	
960	McGonagle, F. E.	„	12	..	0 9 0 „	2 7	0 9	2 8	
961	Hooper, H. R.	„	12	..	0 9 0 „	2 7	0 5	3 0	
962	Potts, J. K.	„	12	..	0 9 0 „	2 6	1 6	4 0	
963	Stace, G. T. W.	„	12	..	0 9 0 „	2 6	0 5	2 11	
964	Walker, R.	„	12	..	0 9 0 „	2 6	0 5	2 11	
965	Williams, G. E	„	12	..	0 9 0 „	2 6	0 11	3 2	
966	Butcher, R. P.	„	12	..	0 9 0 „	2 6	..	2 6	
967	Samuel, J. J.	„	12	..	0 9 6 „	2 6	0 5	2 11	
968	Thomas, E. W.	„	12	..	0 9 0 „	2 6	0 3	2 9	
969	Simpson, A.	Platelayer	12	..	0 9 6 „	2 6	0 7	2 9	
970	Porritt, G. L.	Labourer	14	1	0 9 0 „	2 6	1 1	3 7	
971	Giles, J. W. H.	Surfaceman	12	..	0 9 0 „	2 6	0 5	2 11	
972	Robertson, D. B.	„	12	..	0 9 0 „	2 6	1 10	3 7	
973	Hodge, L.	„	12	..	0 9 0 „	2 6	2 2	4 8	
974	Henke, C. J.	„	12	..	0 9 0 „	2 5	1 4	3 9	
975	Lester, W. J.	„	12	..	0 9 0 „	2 6	1 1	3 7	
976	Leckey, J. C.	Platelayer	12	..	0 9 6 „	2 6	0 3	2 6	
977	Andrews, J. W.	Surfaceman	12	..	0 9 0 „	2 5	0 1	2 6	
978	Lynds, A. W.	„	12	..	0 9 0 „	2 5	0 7	3 0	
979	Burns, W.	„	12	..	0 9 0 „	2 5	0 3	2 8	
980	Hall, A. J.	„	12	..	0 9 0 „	2 5	0 1	2 5	
981	Railton, A.	„	12	..	0 9 0 „	2 5	0 1	2 5	
982	White, R.	„	12	..	0 9 0 „	2 5	0 2	2 5	
983	Docherty, C. A.	„	12	..	0 9 0 „	2 4	0 7	2 11	
984	Cooper, T. F.	„	12	..	0 9 0 „	2 4	3 1	3 11	
985	Campbell, T.	Platelayer	12	..	0 9 6 „	2 4	4 0	3 11	
986	Lowe, H. H.	Surfaceman	12	..	0 9 0 „	2 4	3 6	3 10	
987	Barry, G.	„	12	..	0 9 0 „	2 4	0 4	2 8	
988	Lenz, C. W.	„	12	..	0 9 0 „	2 4	1 6	3 4	
989	Hall, A. C.	„	12	..	0 9 6 „	2 4	2 10	4 11	
990	East, R.	„	12	..	0 9 0 „	2 4	3 3	3 10	
991	Murphy, E.	„	12	..	0 9 0 „	2 4	1 2	3 6	
992	Elderton, H. J.	„	12	..	0 9 0 „	2 4	1 1	3 1	
993	Hollamby, J.	„	12	..	0 9 0 „	2 4	0 10	3 0	
994	Wallace, D.	„	12	..	0 9 0 „	2 4	0 10	2 11	
995	Begg, I. W. D.	„	12	..	0 9 0 „	2 4	0 7	2 11	
996	Madeley, S. T.	„	12	..	0 9 0 „	2 4	0 7	2 9	
997	Lawler, J.	„	12	..	0 9 0 „	2 4	0 8	2 7	
998	Shierlaw, W. S.	„	12	..	0 9 0 „	2 4	0 1	2 4	
999	Seaman, R. J.	„	12	..	0 9 0 „	2 4	..	2 4	
1000	O'Donnell, M.	Labourer	14	1	0 9 0 „	2 3	3 0	5 3	
1001	Nottingham, T.	Surfaceman	12	..	0 9 0 „	2 3	0 5	2 8	
1002	Crisp, H. R.	Labourer	14	1	0 9 0 „	2 3	5 4	2 8	
1003	Whitehorn, S. H.	Surfaceman	12	..	0 9 0 „	2 3	..	2 3	

RAILWAY DEPARTMENT CLASSIFICATION, 1913—*continued.*

Prog. No.	Name.	Classification.				Service			Remarks
		Designation.	Subclass.	Grade.	Rate of Pay	Since last appointed.	Prior to Date last appointed.	For Superannuation Purposes.	
	SECOND DIVISION—*continued.* *Class 3: Maintenance*—continued.				£ s. d.	Y. M.	Y. M.	Y. M.	
1004	Lyons, J.	Labourer	14	1	0 9 0 per diem	2 3	..	2 3	
1005	Collins, R. G.	Fencer	13	..	0 9 0 ″	2 2	1 0	3 2	
1006	Ballantyne, D.	Surfaceman	12	..	0 9 0 ″	2 2	1 6	3 8	
1007	Barron, R. J.	″	12	..	0 9 0 ″	2 2	0 9	2 7	
1008	Leitch, R.	″	12	..	0 9 0 ″	2 2	..	2 2	
1009	McKenzie, J.	″	12	..	0 9 0 ″	2 2	..	2 2	
1010	McMillan, J. J. G.	Platelayer	12	..	0 9 6 ″	2 2	0 8	2 10	
1011	Southby, R. G.	Surfaceman	12	..	0 9 6 ″	2 2	0 7	2 7	
1012	Singleton, J.	″	12	..	0 9 0 ″	2 1	..	2 1	
1013	Cavanagh, J. P.	Platelayer	12	..	0 9 6 ″	2 1	1 7	2 1	
1014	Fell, W. S.	Surfaceman	12	..	0 9 0 ″	2 1	0 11	2 5	
1015	Marsden, A. D.	″	12	..	0 9 0 ″	2 1	0 4	2 5	
1016	Johnston, W. A.	″	12	..	0 9 0 ″	2 1	2 2	4 3	
1017	Hogan, J. J.	″	12	..	0 9 0 ″	2 1	0 10	2 3	
1018	Tobin, A.	″	12	..	0 9 0 ″	2 1	0 3	2 3	
1019	Caldwell, J.	″	12	..	0 9 0 ″	2 1	0 3	2 4	
1020	Perkins, J.	″	12	..	0 9 0 ″	2 1	2 0	3 0	
1021	McKay, D. C.	″	12	..	0 9 0 ″	2 1	1 10	3 0	
1022	Brosnan, T.	″	12	..	0 9 0 ″	2 1	0 5	2 6	
1023	Henderson, A.	″	12	..	0 9 0 ″	2 1	3 0	5 1	
1024	Courtnay, L.	″	12	..	0 9 0 ″	2 1	..	2 1	
1025	Croom, S. H.	″	12	..	0 9 0 ″	2 1	..	2 1	
1026	Phelan, C. D. D.	″	12	..	0 9 0 ″	2 1	3 3	2 1	
1027	Green, A.	″	12	..	0 9 0 ″	2 0	0 9	2 9	
1028	Musson, W. P.	″	12	..	0 9 6 ″	2 0	0 6	2 6	
1029	McPherson, R.	″	12	..	0 9 0 ″	2 0	1 7	2 5	
1030	Johnston, J. A.	″	12	..	0 9 0 ″	2 0	..	2 0	
1031	Singleton, M.	″	12	..	0 9 0 ″	2 0	0 9	2 9	
1032	Keogh, D. P.	″	12	..	0 9 0 ″	2 0	0 7	2 7	
1033	McGahan, J. S.	″	12	..	0 9 0 ″	2 0	2 5	2 9	
1034	Faulkner, J. J.	″	12	..	0 9 0 ″	2 0	1 10	3 0	
1035	Matheson, J.	″	12	..	0 9 0 ″	2 0	0 10	2 10	
1036	Harvey, J.	″	12	..	0 9 0 ″	2 0	..	2 0	
1037	McCarthy, D.	″	12	..	0 9 0 ″	7 0	..	7 0	
1038	Luscombe, C. E.	Platelayer	12	..	0 9 6 ″	6 10	..	6 10	
1039	McLoughlin, W.	Fencer	13	..	0 9 0 ″	6 4	..	6 4	
1040	O'Kane, F.	Surfaceman	12	..	0 9 0 ″	6 2	..	6 2	
1041	Korner, A.	″	12	..	0 9 0 ″	2 0	0 10	2 3	
1042	Brown, C. M. A.	″	12	..	0 9 0 ″	2 0	0 1	2 1	
1043	Quine, R. A.	″	12	..	0 9 0 ″	2 0	0 1	2 1	
1044	Rawlings, W. W.	″	12	..	0 9 0 ″	2 0	..	2 0	
1045	Heppleston, J. J.	Labourer	14	1	0 9 0 ″	2 0	3 5	5 5	
1046	Clark, F.	Surfaceman	12	..	0 9 0 ″	2 0	0 7	2 7	
1047	Tweeddale, H.	Labourer	14	1	0 9 0 ″	2 0	1 2	2 6	
1048	Ryan, J.	Surfaceman	12	..	0 9 0 ″	2 0	0 5	2 5	
1049	Green, A.	″	12	..	0 9 0 ″	2 0	0 5	2 3	
1050	Dent, W.	Fencer	13	..	0 9 0 ″	1 11	2 5	3 5	
1051	Knipe, W. J.	Surfaceman	12	..	0 9 0 ″	1 11	6 9	8 8	
1052	Woodward, C. H.	Labourer	14	1	0 9 0 ″	1 11	4 6	6 5	
1053	Brumby, J. W.	Surfaceman	12	..	0 9 0 ″	1 11	0 10	2 9	
1054	Bate, A.	″	12	..	0 9 6 ″	1 11	0 2	2 1	
1055	Lepper, W. S.	″	12	..	0 9 0 ″	1 11	0 2	2 1	
1056	Thodey, A.	″	12	..	0 9 0 ″	1 11	4 10	3 7	
1057	Hoffman, A. P.	″	12	..	0 9 0 ″	1 11	0 4	2 3	
1058	McMurtrie, F.	″	12	..	0 9 0 ″	1 11	0 1	2 0	
1059	Foulkes, R.	″	12	..	0 9 0 ″	1 11	..	1 11	
1060	Fricker, W. H.	″	12	..	0 9 0 ″	1 11	..	1 11	
1061	Connell, J.	″	12	..	0 9 0 ″	1 11	1 4	3 3	
1062	Melton, W.	Labourer	14	1	0 9 0 ″	1 11	1 3	3 2	
1063	Le Bas, H. W. A.	Surfaceman	12	..	0 9 0 ″	1 11	0 4	1 11	
1064	Bowley, G.	″	12	..	0 9 0 ″	1 11	0 1	2 0	
1065	Mullin, H.	″	12	..	0 9 0 ″	1 11	1 2	3 1	
1066	Low, A.	″	12	..	0 9 6 ″	1 11	0 7	1 11	
1067	Borman, J. T.	″	12	..	0 9 0 ″	1 11	0 7	2 4	
1068	Hall, H.	″	12	..	0 9 0 ″	1 11	0 2	2 1	
1069	Carr, J.	″	12	..	0 9 0 ″	1 11	3 9	2 10	
1070	McDowell, S. R.	″	12	..	0 9 0 ″	1 11	0 1	1 11	
1071	Stade, C. W. H.	″	12	..	0 9 0 ″	1 10	2 4	3 9	
1072	Ball, J.	″	12	..	0 9 6 ″	1 10	5 9	2 5	
1073	Thomson, J. E.	″	12	..	0 9 0 ″	1 10	..	1 10	
1074	Thomas, R. J.	″	12	..	0 9 0 ″	1 10	0 5	2 3	
1075	White, A.	″	12	..	0 9 0 ″	1 10	0 11	1 11	
1076	Thrush, A.	Labourer	14	1	0 9 0 ″	1 10	2 5	3 7	
1077	Fantham, J. W.	Surfaceman	12	..	0 9 0 ″	1 10	0 11	2 5	
1078	Hagen, O. C.	″	12	..	0 9 0 ″	1 10	0 6	2 4	
1079	Farrington, J.	″	12	..	0 9 0 ″	1 10	4 10	6 8	
1080	Dalton, G. A. C.	″	12	..	0 9 0 ″	1 9	1 0	2 9	

Railway Department Classification, 1913—*continued.*

Prog. No.	Name.	Classification.				Service			Remarks.
		Designation.	Subclass.	Grade.	Rate of Pay.	Since last appointed.	Prior to Date last appointed.	For Superannuation Purposes.	
		SECOND DIVISION *continued.* *Class 3: Maintenance*—continued.							
					£ s. d.	Y. M.	Y. M.	Y. M.	
1081	Roper, J.	Surfaceman	12	..	0 9 0 per diem	1 9	4 4	6 1	
1082	Hobbs, G. J.	″	12	..	0 9 0 ″	1 9	0 6	2 3	
1083	Deane, A.	″	12	..	0 9 0 ″	1 9	1 1	2 3	
1084	Small, W. H.	″	12	..	0 9 6 ″	1 9	0 5	2 2	
1085	Redfern, W.	″	12	..	0 9 0 ″	1 9	1 1	2 10	
1086	Lockery, P.	″	12	..	0 9 0 ″	1 9	1 2	2 10	
1087	Horgan, M.	″	12	..	0 9 0 ″	1 9	1 3	2 4	
1088	Anderson, F.	″	12	..	0 9 6 ″	1 9	3 3	3 0	
1089	Wright, W. J.	″	12	..	0 9 0 ″	1 9	1 2	2 11	
1090	Brydon, R. W.	″	12	..	0 9 0 ″	1 9	1 2	2 11	
1091	James, W. H.	″	12	..	0 9 0 ″	1 9	0 5	2 2	
1092	Brennan, J. S.	″	12	..	0 9 0 ″	1 9	0 3	2 0	
1093	O'Meara, G. E.	″	12	..	0 9 0 ″	1 9	..	1 9	
1094	Dunford, C. W.	Labourer	14	1	0 9 0 ″	1 9	0 1	1 10	
1095	McLaughlan, M.	Surfaceman	12	..	0 9 0 ″	1 9	0 10	2 4	
1096	Wemyss, R. M.	″	12	..	0 9 0 ″	1 8	..	1 8	
1097	Roach, M.	″	12	..	0 9 0 ″	1 8	0 10	2 6	
1098	Prince, C.	Platelayer	12	..	0 9 6 ″	1 8	0 5	2 1	
1099	Lyons, T.	Surfaceman	12	..	0 9 0 ″	1 8	..	1 8	
1100	Marshall, E.	″	12	..	0 9 0 ″	1 8	1 5	3 1	
1101	Knox, T.	″	12	..	0 9 0 ″	1 8	5 5	4 1	
1102	Harland, A. E. B.	″	12	..	0 9 0 ″	1 8	0 6	2 2	
1103	Maclean, H. E.	Labourer	14	1	0 9 0 ″	1 8	4 10	3 7	
1104	O'Connell, T.	Surfaceman	12	..	0 9 0 ″	1 8	1 3	2 11	
1105	Goodhue, C. N.	″	12	..	0 9 0 ″	1 8	1 1	2 9	
1106	Mueller, H. A.	″	12	..	0 9 0 ″	1 8	0 2	1 10	
1107	Bennett, A. W.	″	12	..	0 9 0 ″	1 8	..	1 8	
1108	Meehan, T. M.	″	12	..	0 9 0 ″	1 8	2 9	3 2	
1109	Barry, J. P.	″	12	..	0 9 0 ″	1 8	0 11	2 7	
1110	Brennan, H. S.	″	12	..	0 9 0 ″	1 7	2 2	3 9	
1111	Hoarn, J.	″	12	..	0 9 0 ″	1 7	0 9	2 4	
1112	Allen, E.	Platelayer	12	..	0 9 6 ″	1 7	0 4	1 11	
1113	Hosking, J. H.	Surfaceman	12	..	0 9 0 ″	1 7	0 3	1 10	
1114	Shelley, J. M.	″	12	..	0 9 0 ″	1 7	..	1 7	
1115	Crookes, W.	″	12	..	0 9 0 ″	1 7	0 5	2 0	
1116	McDonald, R. A.	″	12	..	0 9 0 ″	1 7	0 4	1 9	
1117	Symonds, G. R.	″	12	..	0 9 0 ″	1 7	0 2	1 9	
1118	Cronin, J.	″	12	..	0 9 0 ″	1 7	1 1	2 4	
1119	Grindrod, G. H.	″	12	..	0 9 0 ″	1 6	2 1	3 6	
1120	Ruff, R.	″	12	..	0 9 0 ″	1 6	0 1	1 7	
1121	Meldrum, R. J.	″	12	..	0 9 0 ″	1 6	..	1 6	
1122	Westbury, W. T.	″	12	..	0 9 0 ″	1 6	1 10	2 9	
1123	Glastonbury, A. G.	″	12	..	0 9 0 ″	1 6	0 7	2 1	
1124	McLean, C.	″	12	..	0 9 0 ″	1 6	3 4	4 10	
1125	Williams, W. J.	″	12	..	0 9 0 ″	1 6	2 6	3 11	
1126	Wellman, G. C.	″	12	..	0 9 0 ″	1 6	2 10	2 3	
1127	O'Donnell, J.	″	12	..	0 9 0 ″	1 6	0 3	1 9	
1128	Sinclair, D. E.	″	12	..	0 9 0 ″	1 6	..	1 6	
1129	Wilson, G. H. J.	″	12	..	0 9 0 ″	1 5	1 5	1 8	
1130	Davis, H.	″	12	..	0 9 0 ″	1 5	2 1	3 6	
1131	Wilson, A.	″	12	..	0 9 0 ″	1 5	1 3	1 9	
1132	Cassidy, J.	Labourer	14	1	0 9 0 ″	1 5	2 7	4 0	
1133	Enright, P. J.	Surfaceman	12	..	0 9 0 ″	1 5	0 1	1 6	
1134	Cronk, J.	Labourer	14	1	0 9 0 ″	1 5	1 3	2 8	
1135	Byrnes, W.	Surfaceman	12	..	0 9 0 ″	1 5	1 4	2 9	
1136	Pickens, J. W. S.	″	12	..	0 9 0 ″	1 5	0 9	1 11	
1137	Pattinson, H.	″	12	..	0 9 0 ″	1 5	1 9	1 5	
1138	Osborn, J.	″	12	..	0 9 0 ″	1 5	0 2	1 5	
1139	Jones, J.	″	12	..	0 9 0 ″	1 5	0 2	1 7	
1140	Scannell, M.	″	12	..	0 9 0 ″	1 5	0 4	1 5	
1141	Davies, W. D.	″	12	..	0 9 0 ″	1 5	0 2	1 5	
1142	Tangney, E.	″	12	..	0 9 0 ″	1 5	0 3	1 5	
1143	Barnes, E. J.	Labourer	12	..	0 9 0 ″	1 5	5 1	6 6	
1144	O'Brien, J.	Surfaceman	12	..	0 9 0 ″	1 5	0 10	1 5	
1145	Atkinson, F. F.	″	12	..	0 9 0 ″	1 5	0 3	1 5	
1146	McCallum, C.	″	12	..	0 9 0 ″	1 4	2 4	1 4	
1147	West, T.	″	12	..	0 9 0 ″	1 4	0 2	1 4	
1148	Tomlinson, J.	″	12	..	0 9 0 ″	1 4	..	1 4	
1149	Junge, C.	″	12	..	0 9 0 ″	1 4	0 2	1 6	
1150	Mason, T.	″	12	..	0 9 0 ″	1 4	0 11	1 4	
1151	Nobbs, J.	″	12	..	0 9 0 ″	1 4	0 5	1 4	
1152	McCutcheon, T.	″	12	..	0 9 0 ″	1 4	2 1	1 4	
1153	Kinloch, R.	″	12	..	0 9 0 ″	1 4	6 6	1 4	
1154	Wood, F. P.	″	12	..	0 9 0 ″	1 3	0 3	1 3	
1155	Farr, J. I.	″	12	..	0 9 0 ″	1 3	0 9	1 3	
1156	Harper, F.	Labourer	14	1	0 9 0 ″	1 3	0 8	1 11	
1157	Mercer, E. T.	Surfaceman	12	..	0 9 0 ″	1 3	0 11	1 3	

Railway Department Classification, 1913—*continued.*

Prog. No.	Name.	Classification.				Service			Remarks
		Designation.	Subclass.	Grade.	Rate of Pay.	Since last appointed.	Prior to Date last appointed.	For Superannuation Purposes.	
		SECOND DIVISION—*continued.*							
		Class 3: Maintenance—continued.							
					£ s. d.	Y. M.	Y. M.	Y. M.	
1158	Avison, J. T.	Surfaceman	12	..	0 9 0 per diem	1 3	0 2	1 3	
1159	Lyons, J.	„	12	..	0 9 0 „	1 3	0 5	1 8	
1160	Broome, R. M.	„	12	..	0 9 0 „	1 3	0 2	1 3	
1161	Minogue, J.	Platelayer	12	..	0 9 6 „	1 3	2 10	1 3	
1162	Scahill, J.	„	12	..	0 9 6 „	1 3	1 6	1 11	
1163	Dalley, J. J. A.	Surfaceman	12	..	0 9 0 „	1 3	..	1 3	
1164	Farmer, T.	„	12	..	0 9 0 „	1 3	3 9	1 3	
1165	Brosnahan, P. J.	„	12	..	0 9 6 „	1 3	0 2	1 3	
1166	Gibson, A. A.	„	12	..	0 9 6 „	1 3	0 4	1 3	
1167	Perfect, C. W.	„	12	..	0 9 0 „	1 2	0 2	1 2	
1168	Jackson, F.	„	12	..	0 9 0 „	1 2	0 9	1 8	
1169	Clark, W. E.	„	12	..	0 9 0 „	1 2	1 8	1 2	
1170	Holdaway, H. R.	„	12	..	0 9 0 „	1 2	1 1	1 2	
1171	Paterson, W.	„	12	..	0 9 0 „	1 2	0 1	1 2	
1172	Divane, J.	„	12	..	0 9 0 „	1 2	0 7	1 2	
1173	Absalom, G. E.	„	12	..	0 9 0 „	1 2	1 4	1 2	
1174	Keemer, A. J.	„	12	..	0 9 0 „	1 2	0 5	1 2	
1175	Finlay, R. A.	„	12	..	0 9 0 „	1 2	0 2	1 2	
1176	Wilks, S. H.	„	12	..	0 9 0 „	1 2	0 2	1 2	
1177	Schmotzer, F.	„	12	..	0 9 6 „	1 2	1 5	1 2	
1178	Finlay, R.	„	12	..	0 9 0 „	1 2	0 6	1 8	
1179	Louden, A.	„	12	..	0 9 0 „	1 2	1 0	1 2	
1180	Walsh, J.	„	12	..	0 9 0 „	1 1	0 7	1 1	
1181	Whyte, M.	„	12	..	0 9 0 „	1 1	0 8	1 1	
1182	Keleher, M.	„	12	..	0 9 0 „	1 1	0 5	1 6	
1183	Corbett, R. S.	„	12	..	0 9 0 „	1 1	0 10	1 1	
1184	McCrossin, W.	„	12	..	0 9 0 „	1 1	0 9	1 1	
1185	Bassett, A. I. J.	„	12	..	0 9 0 „	1 1	0 2	1 3	
1186	Milner, J. M.	„	12	..	0 9 0 „	1 1	0 7	1 1	
1187	Harper, W.	„	12	..	0 9 0 „	1 1	0 6	1 1	
1188	Dimmock, A. R.	„	12	..	0 9 0 „	1 0	0 5	1 5	
1189	Millar, A. G. J.	„	12	..	0 9 6 „	1 0	1 0	1 0	
1190	Allen, J.	„	12	..	0 9 0 „	1 0	0 6	1 6	
1191	Kershaw, J.	„	12	..	0 9 0 „	1 0	0 7	1 7	
1192	Murphy, G.	„	12	..	0 9 0 „	1 0	0 3	1 0	
1193	Gdanitz, M. P.	„	12	..	0 9 6 „	1 0	..	1 0	
1194	Dukes, W. H.	„	12	..	0 9 0 „	1 0	1 9	1 0	
1195	McLaren, A.	„	12	..	0 9 0 „	0 11	0 5	0 11	
1196	Sangster, W.	„	12	..	0 9 0 „	0 11	1 1	0 11	
1197	Blommaart, W. J.	„	12	..	0 9 0 „	0 11	..	0 11	
1198	Scully, M.	„	12	..	0 9 0 „	0 11	0 1	1 0	
1199	Voltz, A. D.	„	12	..	0 9 0 „	0 11	3 2	0 11	
1200	Knight, S. S. F.	„	12	..	0 9 0 „	0 11	0 1	1 0	
1201	Richards, B.	„	12	..	0 9 0 „	0 11	0 8	0 11	
1202	Bilkey, J.	„	12	..	0 9 0 „	0 11	0 6	0 11	
1203	Gilmore, H.	„	12	..	0 9 0 „	0 11	0 4	0 11	
1204	Keeffe, D.	„	12	..	0 9 0 „	0 11	..	0 11	
1205	Connor, B.	„	12	..	0 9 0 „	0 10	0 8	0 10	
1206	Clark, H. W.	„	12	..	0 9 0 „	0 10	0 4	1 2	
1207	Savage, O. R.	„	12	..	0 9 0 „	0 10	..	0 10	
1208	Pritchard, H.	„	12	..	0 9 0 „	0 10	0 2	0 10	
1209	Wilson, R.	Labourer	14	1	0 9 0 „	0 10	2 11	3 9	
1210	Kelly, J. T.	Surfaceman	12	..	0 9 0 „	0 10	0 1	0 10	
1211	McPherson, A.	„	12	..	0 9 0 „	0 10	0 1	0 11	
1212	Garty, J.	„	12	..	0 9 6 „	0 10	..	0 10	
1213	Brooks, H. H.	„	12	..	0 9 0 „	0 10	0 3	1 1	
1214	Todd, T.	„	12	..	0 9 0 „	0 10	0 1	0 10	
1215	McKearney, J. E.	„	12	..	0 9 0 „	0 10	1 11	0 10	
1216	Hughes, O.	„	12	..	0 9 0 „	0 10	4 2	0 10	
1217	Pitcher, A. G.	„	12	..	0 9 0 „	0 10	1 11	1 10	
1218	Lilley, J.	„	12	..	0 9 0 „	0 10	2 8	0 10	
1219	Hughes, P.	„	12	..	0 9 0 „	0 10	..	0 10	
1220	Lock, W. H. F.	Labourer	14	1	0 9 0 „	0 10	2 9	3 7	
1221	Burr, C. W.	Surfaceman	12	..	0 9 0 „	0 10	..	0 10	
1222	Fitzpatrick, J.	„	12	..	0 9 0 „	0 10	0 7	0 10	
1223	Brick, P.	„	12	..	0 9 6 „	0 10	0 6	0 10	
1224	McNaughton, R.	„	12	..	0 9 0 „	0 10	0 4	1 2	
1225	Riley, J. J.	„	12	..	0 9 0 „	0 10	1 10	2 8	
1226	Gifkins, J. M.	„	12	..	0 9 0 „	0 10	..	0 10	
1227	Felix, F. W.	„	12	..	0 9 0 „	0 9	5 7	5 11	
1228	O'Donnell, D.	„	12	..	0 9 0 „	0 9	1 5	0 9	
1229	Murphy, F. G.	„	12	..	0 9 0 „	0 9	0 11	0 9	
1230	Crawford, J. M.	„	12	..	0 9 0 „	0 9	0 2	0 11	
1231	Lee, J. T.	„	12	..	0 9 0 „	0 9	0 2	0 11	
1232	Wilson, J.	„	12	..	0 9 0 „	0 9	2 0	1 8	
1233	Shannon, D.	„	12	..	0 9 0 „	0 9	1 6	0 9	
1234	Knowles, J. H. H.	„	12	..	0 9 0 „	0 9	0 5	0 9	

RAILWAY DEPARTMENT CLASSIFICATION, 1913—*continued.*

SECOND DIVISION—*continued.*

Class 3: Maintenance—continued.

Prog. No.	Name.	Classification.				Service			Remarks
		Designation.	Subclass.	Grade.	Rate of Pay	Since last appointed.	Prior to Date last appointed.	For Superannuation Purposes.	
					£ s. d.	Y. M.	Y. M.	Y. M.	
1235	Dean, G. L.	Surfaceman	12	..	0 9 0 per diem	0 9	0 10	0 9	
1236	Geary, R. J.	"	12	..	0 9 0 "	0 9	1 3	0 9	
1237	Newell, M.	"	12	..	0 9 6 "	0 9	0 8	1 1	
1238	Healy, E.	"	12	..	0 9 0 "	0 9	1 11	0 9	
1239	Horan, G. H... ..	"	12	..	0 9 0 "	0 9	0 4	0 9	
1240	Johnson, P. F. ..	"	12	..	0 9 0 "	0 9	3 11	0 9	
1241	Sutton, T.	"	12	..	0 9 0 "	0 9	5 11	0 9	
1242	Beckett, H.	"	12	..	0 9 6 "	0 9	3 7	4 4	
1243	Hartley, D.	"	12	..	0 9 0 "	0 9	0 3	0 9	
1244	Quealy, M.	"	12	..	0 9 0 "	0 9	4 1	3 9	
1245	Pascoe, W. H. ..	"	12	..	0 9 0 "	0 9	0 10	1 6	
1246	Francis, A. P. ..	"	12	..	0 9 0 "	0 9	1 2	1 11	
1247	Donovan, E.	"	12	..	0 9 0 "	0 8	0 8	0 8	
1248	O'Brien, A.	"	12	..	0 9 0 "	0 8	6 5	5 0	
1249	Jackson, A. T. ..	"	12	..	0 9 0 "	0 8	0 11	0 8	
1250	Gale, J. R.	"	12	..	0 9 0 "	0 8	0 6	0 8	
1251	Gibbons, A. L. ..	"	12	..	0 9 0 "	0 8	0 4	1 0	
1252	Geraghty, L. T. ..	"	12	..	0 9 0 "	0 8	2 1	2 9	
1253	Connors, D. A. ..	"	12	..	0 9 0 "	0 8	1 2	0 8	
1254	Hay, J. B.	"	12	..	0 9 0 "	0 8	0 9	0 8	
1255	Stuart, W. A. H. ..	"	12	..	0 9 0 "	0 8	0 5	0 8	
1256	Sharp, J. W.	"	12	..	0 9 0 "	0 8	0 1	0 8	
1257	Toner, J.	"	12	..	0 9 0 "	0 8	0 1	0 8	
1258	Giles, W.	"	12	..	0 9 0 "	0 8	0 2	0 8	
1259	Heslin, P.	"	12	..	0 9 0 "	0 8	0 2	0 8	
1260	Leeks, R. L.	"	12	..	0 9 6 "	0 8	0 1	0 8	
1261	Moyle, J. A.	"	12	..	0 9 0 "	0 8	2 1	1 4	
1262	Maugan, M.	"	12	..	0 9 0 "	0 8	..	0 8	
1263	Woodcock, D. ..	"	12	..	0 9 0 "	0 8	0 6	0 8	
1264	Lowe, F. G.	"	12	..	0 9 6 "	0 8	3 4	0 8	
1265	Jones, W.	"	12	..	0 9 0 "	0 8	0 2	0 10	
1266	Brewer, W.	"	12	..	0 9 0 "	0 7	0 11	0 7	
1267	Watson, O. G. ..	"	12	..	0 9 0 "	0 7	1 7	0 7	
1268	Taylor, G. T.	"	12	..	0 9 6 "	0 7	1 1	0 7	
1269	Lyall, J. R.	Labourer	14	1	0 9 0 "	0 7	1 10	0 7	
1270	Lunn, O. J.	Surfaceman	12	..	0 9 0 "	0 7	..	0 7	
1271	Scott, H. L.	"	12	..	0 9 0 "	0 7	0 7	0 7	
1272	Fruin, F. G.	"	12	..	0 9 6 "	0 7	1 5	0 7	
1273	Fruin, F. L.	"	12	.	0 9 0 "	0 7	1 5	0 7	
1274	Moore, W. H. B. ..	"	12	..	0 9 0 "	0 7	0 7	0 7	
1275	Sweetman, A. W. A. ..	"	12	..	0 9 0 "	0 7	0 5	0 7	
1276	Ede, A. S.	"	12	..	0 9 0 "	0 7	1 9	0 7	
1277	Garvey, J. J.	"	12	..	0 9 0 "	0 7	0 7	0 7	
1278	McLean, D.	"	12	..	0 9 0 "	0 7	0 4	0 10	
1279	Farrell, W.	"	12	..	0 9 0 "	0 7	0 2	0 9	
1280	Chick, P. H.	"	12	..	0 9 0 "	0 7	0 11	1 6	
1281	Milne, J.	Platelayer	12	..	0 9 6 "	0 7	5 5	0 7	
1282	Morton, D. F. ..	Surfaceman	12	..	0 9 0 "	0 7	1 6	0 7	
1283	McCauley, W. P. ..	"	12	..	0 9 0 "	0 7	0 5	0 7	
1284	Sellars, A.	"	12	..	0 9 0 "	0 7	0 4	0 7	
1285	Brown, H. H. ..	Platelayer	12	..	0 9 6 "	0 7	1 4	0 7	
1286	White, N. S.	Surfaceman	12	..	0 9 0 "	0 7	0 2	0 7	
1287	Moody, F. H. ..	"	12	..	0 9 0 "	0 7	0 4	0 7	
1288	Orford, J. W... ..	" . ..	12	..	0 9 0 "	0 6	0 3	0 6	
1289	Lee, W.	"	12	..	0 9 0 "	0 6	0 1	0 6	
1290	Bishop, F. G... ..	"	12	..	0 9 0 "	0 6	0 2	0 8	
1291	McCutcheon, R. D. ..	"	12	..	0 9 0 "	0 6	0 4	0 6	
1292	McKay, D. A. A. ..	"	12	..	0 9 0 "	0 6	0 3	0 6	
1293	Rutherford, W. D. ..	"	12	..	0 9 0 "	0 6	0 6	0 6	
1294	Ness, R.	"	12	..	0 9 0 "	0 6	0 2	0 6	
1295	Sysum, W. R. ..	"	12	..	0 9 0 "	0 6	0 2	0 6	
1296	Hieatt, S. H.	"	12	..	0 9 0 "	0 6	2 0	0 6	
1297	Clifford, D.	"	12	..	0 9 0 "	0 6	0 7	0 9	
1298	Brown, W.	"	12	..	0 9 0 "	0 6	0 4	0 6	
1299	Manson, D. L. ..	"	12	..	0 9 0 "	0 6	1 8	0 6	
1300	Ousey, P. S.	"	12	..	0 9 0 "	0 6	0 3	0 6	
1301	Renehan, H. J. ..	"	12	..	0 9 0 "	0 6	..	0 6	
1302	Creighton, J.	"	12	..	0 9 0 "	0 6	..	0 6	
1303	Reed, F. B.	"	12	..	0 9 0 "	0 6	..	0 6	
1304	Dunstan, G.	"	12	..	0 9 0 "	0 6	..	0 6	
1305	Grimson, E.	"	12	..	0 9 0 "	0 6	..	0 6	
1306	Dunlop, A.	"	12	..	0 9 0 "	0 6	4 8	0 6	
1307	Hepburn, J. S. ..	"	12	..	0 9 6 "	0 6	0 1	0 6	
1308	Frago, J.	"	12	..	0 9 0 "	0 6	1 0	0 6	
1309	Doidge, W. H. ..	"	12	..	0 9 0 "	0 6	0 11	0 6	
1310	Barton, W. H. ..	"	12	..	0 9 0 "	0 6	1 5	0 6	
1311	Chandler, T. W. ..	"	12	..	0 9 0 "	0 6	0 4	0 6	

RAILWAY DEPARTMENT CLASSIFICATION, 1913—*continued.*

SECOND DIVISION—*continued.*

Class 3: Maintenance—continued.

Prog. No.	Name.	Classification.				Service			Remarks.
		Designation.	Subclass.	Grade.	Rate of Pay.	Since last appointed.	Prior to Date last appointed.	For Superannuation Purposes.	
					£ s. d.	Y. M.	Y. M.	Y. M.	
1312	Kennedy, J. J.	Surfaceman	12	..	0 9 0 per diem	0 6	0 4	0 6	
1313	Wright, W. J.	„	12	..	0 9 0 „	0 6	2 9	0 9	
1314	Price, E. C.	„	12	..	0 9 0 „	0 6	0 1	0 6	
1315	Sumner, W. W.	„	12	..	0 9 0 „	0 5	1 5	0 5	
1316	Shaw, E. A.	Labourer	14	1	0 9 0 „	0 5	0 8	1 1	
1317	Goble, J	Surfaceman	12	..	0 9 0 „	0 5	0 2	0 5	
1318	Taylor, E. T.	„	12	..	0 9 0 „	0 5	0 2	0 5	
1319	McGonnell, G. T.	„	12	..	0 9 0 „	0 5	0 2	0 7	
1320	Ball, A.	„	12	..	0 9 0 „	0 5	..	0 5	
1321	Mueller, H. L.	„	12	..	0 9 0 „	0 5	0 11	0 5	
1322	Duschenski, J.	„	12	..	0 9 0 „	0 5	0 2	0 5	
1323	Leishman, C.	„	12	..	0 9 0 „	0 5	..	0 5	
1324	Churchill, P. R.	„	12	..	0 9 0 „	0 5	4 3	0 11	
1325	Bird, W. R.	„	12	..	0 9 0 „	0 5	0 8	0 5	
1326	Green, A.	„	12	..	0 9 0 „	0 5	0 3	0 8	
1327	Moylan, E.	„	12	..	0 9 0 „	0 5	0 6	0 11	
1328	Pollard, T.	„	12	..	0 9 6 „	0 5	..	0 5	
1329	Barry, M.	„	12	..	0 9 0 „	0 5	0 11	0 5	
1330	Keen, W.	„	12	..	0 9 0 „	0 5	4 3	0 5	
1331	Roulston, R. M.	„	12	..	0 9 0 „	0 5	0 7	1 0	
1332	Troy, T.	„	12	..	0 9 0 „	0 5	0 3	0 8	
1333	McCutcheon, W. D.	„	12	..	0 9 0 „	0 5	..	0 5	
1334	Lowndes, S. J.	„	12	..	0 9 0 „	0 5	5 4	0 5	
1335	Lee, E.	„	12	..	0 9 0 „	0 4	0 1	0 4	
1336	Parker, W. J.	„	12	..	0 9 0 „	0 4	..	0 4	
1337	Burch, W. W.	„	12	..	0 9 0 „	0 4	..	0 4	
1338	Kennedy, J.	„	12	..	0 9 6 „	0 4	0 2	0 4	
1339	Ward, W. E.	Labourer	14	1	0 9 0 „	0 4	13 8	14 0	
1340	Thompson, C. P.	Surfaceman	12	..	0 9 0 „	0 4	0 7	0 9	
1341	Petherbridge, G. T.	„	12	..	0 9 0 „	0 4	0 1	0 4	
1342	Jackson, A. J.	„	12	..	0 9 0 „	0 4	1 2	0 4	
1343	Lock, B. G.	„	12	..	0 9 0 „	0 4	0 9	1 1	
1344	Watson, T.	„	12	..	0 9 0 „	0 3	0 8	0 3	
1345	Savage, H. G.	„	12	..	0 9 0 „	0 3	..	0 3	
1346	Hannigan, P.	„	12	..	0 9 0 „	0 3	0 4	0 3	
1347	Barnes, J. T.	„	12	..	0 9 0 „	0 3	1 6	1 9	
1348	Finlayson, J. P.	„	12	..	0 9 0 „	0 3	1 5	0 4	
1349	Eggers, H. G. K.	Fencer	13	..	0 9 0 „	0 3	0 2	0 5	
1350	Orlowski, J.	Surfaceman	12	..	0 9 0 „	0 2	1 9	1 8	
1351	Lowen, H. D.	„	12	..	0 9 0 „	0 2	1 2	0 2	
1352	Halkett, F.	„	12	..	0 9 0 „	0 2	0 3	0 5	
1353	Kydd, R.	„	12	..	0 9 0 „	0 2	..	0 2	
1354	Bashford, R. H. P.	Labourer	14	1	0 9 0 „	0 2	4 5	0 2	
1355	Osmond, W. H.	Surfaceman	12	..	0 9 0 „	0 2	0 4	0 5	
1356	Coldicutt, G. J.	„	12	..	0 9 0 „	4 2	..	4 2	
1357	Murray, F.	„	12	..	0 9 0 „	0 2	1 0	0 5	
1358	Day, W. G.	„	12	..	0 9 0 „	0 2	0 10	0 2	
1359	Lythgoe, G.	„	12	..	0 9 0 „	0 2	1 8	1 5	
1360	Cashmore, H.	„	12	..	0 9 0 „	0 2	2 7	0 2	
1361	McSweeney, J.	„	12	..	0 9 0 „	0 2	0 4	0 2	
1362	Thausen, A.	„	12	..	0 9 0 „	0 2	0 2	0 4	
1363	Boaz, E. G.	Labourer	14	1	0 9 0 „	0 2	0 11	1 1	
1364	Sargisson, A.	Surfaceman	12	..	0 9 0 „	0 2	1 2	0 2	
1365	Lefeber, J.	„	12	..	0 9 0 „	0 2	0 9	0 2	
1366	Bell, F. W. H.	„	12	..	0 9 0 „	0 2	0 2	0 2	
1367	Tangney, J.	„	12	..	0 9 0 „	0 1	0 11	0 1	
1368	Baker, F.	„	12	..	0 9 0 „	0 1	0 4	0 1	
1369	Atkins, A. H.	„	11	..	0 9 0 „	0 1	0 2	0 3	
1370	Callaghan, J.	Labourer	14	1	0 9 0 „	0 1	5 1	5 2	
1371	Henry, W. J.	Surfaceman	12	..	0 9 0 „	0 1	1 10	0 1	
1372	Green, W. R.	„	12	..	0 9 0 „	0 1	2 1	0 1	
1373	Cossey, P. R.	„	12	..	0 9 0 „	0 1	1 6	0 1	
1374	Rogers, W. H.	„	12	..	0 9 0 „	0 1	1 6	0 1	
1375	Main, W. A.	„	12	..	0 9 0 „	0 1	1 1	0 1	
1376	Douglas, B.	„	12	..	0 9 0 „	0 1	0 4	0 1	
1377	Lawlor, D.	„	12	..	0 9 0 „	0 1	0 4	0 1	
1378	Pearce, G. G.	„	12	..	0 9 0 „	0 1	0 3	0 1	
1379	Roy, A.	„	12	..	0 9 0 „	0 1	0 1	0 2	
1380	Dobson, W. J.	„	12	..	0 9 0 „	0 1	..	0 1	
1381	Gibson, C. E.	„	12	..	0 9 6 „	0 1	1 7	1 8	
1382	White, E. H.	Labourer	14	1	0 9 0 „	15 days	2 3	15 days	
1383	King, J. B.	Platelayer	12	..	0 9 6 „	15 „	0 3	15 „	
1384	Ellerby, R. W.	Surfaceman	12	..	0 9 0 „	15 „	1 3	15 „	
1385	Hurndell, A. W.	„	12	..	0 9 0 „	4 0	..	4 0	
1386	Jewell, J.	„	12	..	0 9 0 „	8 days	..	8 days	
1387	Saunders, E.	„	12	..	0 9 0 „	3 „	1 0	0 4	
1388	Lonie, C. D.	„	12	..	0 9 0 „	1 day	0 8	0 8	
1389	Chisholm, J. R.	„	12	..	0 9 0 „	1 „	0 7	0 7	

RAILWAY DEPARTMENT CLASSIFICATION, 1913—*continued.*

SECOND DIVISION—*continued.*

Class 3: Maintenance—continued.

Prog. No.	Name.	Classification.				Service			Remarks
		Designation.	Subclass.	Grade.	Rate of Pay.	Since last appointed.	Prior to Date last appointed.	For Superannuation Purposes.	
					£ s. d.	Y. M.	Y. M.	Y. M.	
1	Plato, J. P.	Junior Platelayer	12	..	0 6 0 per diem	1 10	..	1 10	
2	Johnston, F. C.	Junior Surfaceman	12	..	0 6 0 „	1 10	..	1 10	
3	Carleton, A. H.	„	12	..	0 6 0 „	1 1	..	1 1	
4	Keats, H.	„	12	..	0 5 6 „	0 10	..	0 10	
1	Caldwell, J.	Signal-adjuster	15	1	0 12 0 „	11 3	..	11 3	
2	Nelson, A. K.	„	15	1	0 12 0 „	9 11	2 3	12 2	
3	Abel, R. A.	„	15	1	0 12 0 „	11 8	7 5	19 1	
4	Burnip, F. S.	„	15	1	0 12 0 „	7 11	3 10	11 4	
5	Walsh, T. A.	„	15	1	0 12 0 „	7 7	2 8	10 3	
6	Stratton, M.	„	15	1	0 12 0 „	7 0	3 1	10 1	
7	Gillies, W. S.	„	15	1	0 12 0 „	6 6	4 1	10 7	
8	Cruickshank, J.	„	15	1	0 11 6 „	6 6	5 6	9 10	
1	Newcombe, D.	„	15	2	0 11 0 „	12 11	0 11	13 10	
2	Fitzgerald, J.	„	15	2	0 11 0 „	19 9	..	19 9	
3	Silbery, D.	„	15	2	0 11 0 „	2 0	9 9	11 9	
4	Fahy, L.	„	15	2	0 11 0 „	2 6	7 5	9 11	
5	Field, H. T.	„	15	2	0 11 0 „	2 6	5 10	8 4	
1	Jones, D. H.	Signal-erector (Leading Hand)	15	..	0 11 0 „	1 10	5 0	6 10	
2	Garner, C.	Ditto	15	..	0 11 0 „	2 6	5 3	7 9	
1	McMillan, A.	Signal-erector	15	1	0 10 6 „	0 3	6 6	0 3	
1	Hanrahan, W. T.	Electric Lineman	16	1	0 11 6 „	11 1	5 7	16 8	
2	Hollis, C. W.	„	16	1	0 11 6 „	10 7	5 11	16 6	
3	Grapes, W. H. H.	„	16	1	0 11 6 „	9 9	..	9 9	
4	McIlvride, P. J.	„	16	1	0 11 6 „	9 8	6 8	16 4	
5	Michelle, J. H.	„	16	1	0 11 6 „	7 7	1 10	9 5	
6	Madgwick, W.	„	16	1	0 11 6 „	7 0	2 6	9 6	
7	Noble, T. H.	„	16	1	0 11 6 „	6 5	3 0	9 5	
8	Nelson, A. J.	„	16	1	0 11 0 „	6 5	2 10	9 3	
9	Olsen, E. K.	„	16	1	0 11 6 „	5 7	3 7	7 8	
10	Locke, R. J.	„	16	1	0 11 6 „	5 7	3 6	9 1	
11	Melville, J. H.	„	16	1	0 11 6 „	5 6	1 10	7 4	
12	Lamb, H. A.	„	16	1	0 11 6 „	2 6	4 6	7 0	
13	Flyger, C. N.	„	16	1	0 11 6 „	2 6	5 7	6 9	
1	Wray, W. J.	„	16	2	0 11 0 „	2 0	4 1	6 1	
2	Thomson, R. J.	„	16	2	0 11 0 „	2 0	6 7	6 1	
3	Todd, R.	„	16	2	0 11 0 „	2 0	4 3	5 11	
4	Garty, F.	„	16	2	0 11 0 „	0 7	6 8	7 3	
5	Mace, H. D.	„	16	2	0 11 0 „	0 6	5 7	6 1	

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OF THE
UNIVERSITY OF ILLINOIS
18 DEC 1913

1913.
NEW ZEALAND.

RAILWAY ACCIDENTS,

FATAL AND NON-FATAL, DURING 1910–11 AND 1911–12.

Return to an Order of the House of Representatives dated the 5th September, 1912.

Ordered, "That there be laid before this House a return for the years ended 31st March, 1911 and 1912, showing—(1) The total number of accidents on the Government railways to Government railway employees; (2) the number of accidents that proved fatal; (3) the grade, branch, and occupation of each of those injured, fatally or otherwise; (4) the total number of accidents to other than railway employees; (5) the number of those accidents which proved fatal."—(Mr. WITTY.)

RETURN OF ACCIDENTS ON NEW ZEALAND GOVERNMENT RAILWAYS FOR THE YEARS ENDED 31ST MARCH, 1911, AND 31ST MARCH, 1912.

(1.) *Total Number of Accidents to Railway Employees.*

Year ended 31st March, 1911.	Year ended 31st March, 1912.
722	806

(2.) *Number of Accidents to Railway Employees that proved Fatal.*

Year ended 31st March, 1911.	Year ended 31st March, 1912.
10	5

(3.) *The Grade and Branch of those injured, fatally or otherwise.*

TRAFFIC BRANCH.

	Year ended 31st March, 1911.	1912.
Stationmasters	...	3
Assistant relieving officer	1	...
Clerk	...	1
Goods foremen	...	2
Cadets	3	1
Guards	19	14
Storemen	7	3
Shunters	15	24
Signalman	...	1
Porters	76	80
Junior porters	3	13
Labourers	3	7
Dining-car waiters	4	2
Dining-car cooks	1	2
Horse-drivers	3	3
Crane-driver	1	...
Nightwatchman	...	1
Casual labourers (wharf and shed)	74	96

MAINTENANCE BRANCH.	Year ended 31st March, 1911.	Year ended 31st March, 1912.
Bridge Inspector	...	1
Sleeper Inspector	...	1
Gangers	11	18
Surfacemen	67	70
Platelayers	26	15
Plumbers	2	2
Carpenters	14	28
Bridgemen	13	18
Painters	3	1
Signal-adjusters	1	1
Mason	1	...
Line-erectors	2	2
Signal-erectors	...	7
Fencers	1	3
Fitters	1	2
Strikers	3	1
Miners	2	3
Blacksmiths	3	2
Skilled labourers	4	4
Labourers	...	2
Casual labourers	93	81
Casual quarrymen	13	6
Casual crane-driver	1	...

LOCOMOTIVE BRANCH.	Year ended 31st March, 1911.	Year ended 31st March, 1912.
Workshops manager	1	...
Workshop foreman	1	...
Clerk	...	1
Mechanical engineering cadets	1	1
Engine-drivers	16	15
Firemen	34	27
Cleaners	17	30
Shop enginemen	2	2
Machinists	16	13
Turners	10	10
Fitters	40	46
Painters	3	...
Boilermakers	23	9
Carpenters	12	15
Crane-drivers	1	1
Strikers	9	11
Lifters	12	11
Train-examiners	3	1
Blacksmiths	4	11
Holders-up	7	6
Coalmen	7	6
Rivet-boys	3	4
Patternmakers	2	...
Furnaceman	1	...
Helpers	3	1
Coppersmiths	...	2
Fettler	...	1
Tinsmith	...	1
Gasman	...	1
Skilled labourers	1	2
Labourers	1	6
Casual labourers	20	41
Ironmoulders	...	8
Casual watchman	1	...
Deck-hands (Lake Wakatipu service)	...	2

(4.) *Total Number of Accidents to other than Railway Employees.*

Year ended 31st March, 1911.	Year ended 31st March, 1912.
64	40

(5.) *Number of Accidents to other than Railway Employees that proved Fatal.*

Year ended 31st March, 1911.	Year ended 31st March, 1912.
25	18

T. Ronayne, General Manager.

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1913.
NEW ZEALAND.

LIBRARY
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GOVERNMENT RAILWAYS SUPERANNUATION FUND:

REPORT OF BOARD.

Laid before Parliament in pursuance of Section 91 of the Government Railways Act, 1908.

In accordance with section 91 of the Government Railways Act, 1908, the Board has the honour to transmit, for the information of Parliament, its balance-sheet, which shows the transactions in the Government Railways Superannuation Fund, for the year ended 31st March, 1913.

The superannuation allowances actually paid during the year amounted to £55,408 2s. 5d., representing grants to 807 members of the Railway service who have either voluntarily resigned or been retired as medically unfit.

Allowances amounting to £6,488 16s. 2d. were paid in respect to 179 widows and 275 children, dependants of deceased members of the service who had not retired on superannuation at the time of their death. Payments amounting to £731 2s. 11d. were made to the legal representatives of the deceased members under section 86, subsection (*c*), and £267 9s. 5d. under section 82, subsection (6), of the Act.

A sum of £9,330 5s., representing contributions of members of the service who voluntarily retired or whose services were otherwise dispensed with during the year, was refunded to the members concerned in accordance with the provisions of the Act. Fines remitted to members amounted to £10 12s. 6d.; travelling-expenses of members of the Board, £32 5s. 6d.; contributions transferred to Public Service Superannuation Fund, £52 0s. 4d.; and charges paid to Public Trust Office, £211 15s. The balance to the credit of the fund on the 31st March, 1913, was £264,455 5s. 4d.

The following show the balances brought forward at the end of each year, and also the annual value of the allowances actually granted by the Board in each year:—

	Balance forward.			Allowance granted.		
	£	s.	d.	£	s.	d.
1903	7,056	11	9	...		
1904	40,357	17	3	12,010	14	8
1905	68,670	7	8	8,519	7	8
1906	90,984	11	10	6,348	13	7
1907	110,736	12	3	4,398	14	11
1908	126,642	18	11	7,332	7	11
1909	157,151	14	9	6,359	11	0
1910	173,876	1	8	11,828	0	6
1911	207,242	7	11	8,064	11	5
1912	233,457	8	6	7,065	16	4
1913	264,455	5	4	8,568	6	6
				80,496	4	6
Less members died, &c.				16,693	3	5
Annual liability at 31st March, 1913				£63,803	1	1

The amounts shown in the lists attached to the balance-sheet are those actually disbursed during the year, and do not represent the total annual allowances granted by the Board to the 31st March, 1913, which were,—

	£	s.	d.
Life allowances on account of voluntary retirements (839 persons)	62,897	12	4
Life allowances on account of retirements as "medically unfit" (147 persons)	8,657	12	2
Allowances to 207 widows and 400 children	8,941	0	0
Total annual allowances granted	£80,496	4	6

Since the inauguration of the Fund, 210 beneficiaries have, however, died, including 40 during the year under review, and 8 members who had been placed on the Fund as "medically unfit" resumed duty. The Fund was relieved of an annual liability of £14,068 8s. 8d. in respect to these 218 members; 148 children have reached the age of fourteen years (29 during the past year), 5 children have died, 23 widows remarried (4 during the past year), and 12 widows died, lessening the liability of the Fund by an additional £2,624 14s. 9d. per annum. There were 1,187 persons actually on the Fund at the 31st March, 1913, involving an annual liability of £63,803 3s. 1d.

W. H. Herries,
Minister of Railways,
Chairman of the Government Railways Superannuation Fund Board.

REVENUE ACCOUNT OF THE GOVERNMENT RAILWAYS SUPERANNUATION FUND UNDER SECTION 90 OF THE GOVERNMENT RAILWAYS ACT, 1908, FOR THE YEAR ENDED 31ST MARCH, 1913.

Dr.				£	s.	d.
To Balance brought forward on 1st April, 1912				233,457	8	6
Contributions paid ..	£63,863	1	1			
Contributions due not paid	5,671	5	11			
Arrears of contributions due by ex-members Wellington and Manawatu Railway Company	13	9	0			
Arrears of contributions due by members in respect to casual service	2,218	18	6			
	£71,766	14	6			
Less contributions due not paid 31st March, 1912	4,924	2	2			
				66,842	12	4
Donation per General Manager ..				5	0	0
Fines paid	£399	15	0			
Fines due not paid ..	21	10	0			
	£421	5	0			
Less fines due not paid 31st March, 1912 ..	34	2	6			
				387	2	6
Payment from Consolidated Fund ..				25,000	0	0
Interest received				10,716	8	4
				£336,408	11	8

Cr.	£	s.	d.	£	s.	d.
By Life allowances paid	55,408	2	5			
Life allowances due not paid	140	2	1			
	£55,548	4	6			
Less life allowances due not paid 31st March, 1912 ..	240	12	3			
				55,307	12	3
Allowances to widows and orphans paid ..	£6,488	16	2			
Allowances to widows and orphans due not paid	283	19	0			
	£6,772	15	2			
Less allowances to widows and orphans due not paid 31st March, 1912 ..	297	4	0			
				6,475	11	2
Payments under section 86 (*c*) ..				731	2	11
Payments under section 82 (6) ..				267	9	5
Contributions refunded	£9,330	5	0			
Contributions due not paid	365	1	6			
	£9,695	6	6			
Less contributions due not refunded 31st March, 1912 ..	830	9	3			
				8,864	17	3
Fines refunded				10	12	6
Travelling-expenses of members of Board				32	5	6
Contributions transferred to Public Service Superannuation Fund ..				52	0	4
Public Trust Office charges ..				211	15	0
Amount of Fund at close of year ..				264,455	5	4
				£336,408	11	8

BALANCE-SHEET OF THE GOVERNMENT RAILWAYS SUPERANNUATION FUND UNDER SECTION 90 OF THE GOVERNMENT RAILWAYS ACT, 1908, FOR THE YEAR ENDED 31ST MARCH, 1913.

Liabilities.

Dr.	£	s.	d.
Fund as per Revenue Account above ..	264,455	5	4
Life allowances not paid	140	2	1
Widows' allowances not paid	283	19	0
Contributions due to be refunded not paid	365	1	6
	£265,244	7	11

Assets.

Cr.	£	s.	d.
In hands of Public Trustee	257,319	4	6
Contributions and fines in transit ..	5,692	15	11
Contributions due by ex-members Wellington and Manawatu Railway Company	13	9	0
Arrears of contributions due by members in respect to casual service ..	2,218	18	6
	£265,244	7	11

W. H. HERRIES,
Chairman of the Government Railways
Superannuation Fund Board.

H. DAVIDSON,
Chief Accountant, New Zealand Railways.

Examined and found correct.—ROBERT J. COLLINS,
2nd June, 1913. Controller and Auditor-General.

STATEMENT OF RECEIPTS AND DISBURSEMENTS OF THE GOVERNMENT RAILWAYS SUPERANNUATION FUND FOR THE YEAR ENDED 31ST MARCH, 1913, UNDER SECTION 90 OF THE GOVERNMENT RAILWAYS ACT, 1908.

Receipts.

Dr.	£	s.	d.	£	s.	d.
Balance in hands of Public Trustee on 31st March, 1912	..			229,867	9	4
Contributions by staff :—						
Head and departmental offices	4,455	9	8			
Whangarei Section	594	1	1			
Kaihu Section	129	17	7			
Gisborne Section	254	2	5			
North Island main lines and branches	27,782	5	8			
South Island main lines and branches	26,223	3	5			
Westland Section	1,929	16	11			
Westport Section	951	17	9			
Nelson Section	481	5	0			
Picton Section	551	3	0			
Lands and Survey Department	3	0	0			
Justice Department	8	9	5			
Arrears of contributions by late employees of Wellington and Manawatu Railway Company	160	17	9			
Arrears of contributions by members in respect to casual service	337	11	5			
				63,863	1	1
Fines	..			399	15	0
Donation per General Manager	..			5	0	0
Payment from Consolidated Fund in terms of section 19 of the Public Service Classification and Superannuation Amendment Act, 1909	..			25,000	0	0
Interest	..			10,716	8	4
				£329,851	13	9

Disbursements.

Cr.

Life allowances paid to—	£	s.	d.
Campbell, G.	42	0	0
Wright, C.	60	0	0
McDonald, J.	67	11	0
Hoban, J.	128	17	0
Lucas, J.	45	13	0
Faulkner, J.	43	16	0
Croft, R.	49	6	0
Chapman, J.	59	17	0
Green, T.	52	3	0
Sharp, R.	45	13	0
Mussen, C.	45	13	0
McDowell, W.	86	2	0
Kennelly, T.	52	3	0
Divehall, R.	47	9	0
Condon, R.	54	5	0
Grant, J.	102	0	0
I'Anson, J. M.	112	14	0
Austen, T.	49	6	0
Hodges, E.	52	3	0
Irving, J.	61	1	0
Knight, J.	45	13	0
Wesley, W.	102	18	0
Morse, G.	51	13	0
Copley, A.	66	0	0
Woods, T.	43	1	0
Dunbar, J.	93	18	0
Clarke, M.	49	6	0
Stark, T.	43	16	0
McHugh, G.	68	9	0
Meyenberg, W.	49	11	0
O'Connor, J.	73	1	0
Haines, C. W.	109	18	0
Smith, J.	49	6	0
Johnston, R.	51	3	0
Towler, F.	47	17	0
Heaton, C.	58	14	0
Capper, E. H.	47	9	0
Sweeney, D.	43	16	0
Rogers, G.	43	16	0
Coggins, G.	56	7	0
Bandeen, J.	67	16	0
Cunningham, H.	34	14	0
Parris, H.	51	3	0
Page, G.	47	9	0
Burke, T.	43	16	0
Wilcock, G.	83	10	0
Meager, T. B.	81	8	0
Grace, G.	54	16	0
Greer, R.	43	16	0
Macdonald, J.	66	18	0
Ballinger, T.	62	12	0
Railton, G.	60	5	0
Thorne, H.	54	16	0
Payne, F.	49	6	0
McEwen, W.	41	2	0
Roberts, W.	99	13	0
Adkins, T.	58	9	0
Egan, T.	38	7	0
Rhodes, J.	25	1	0
Horsnell, S.	75	13	0
Fraser, E.	51	0	0
Gilroy, J.	63	8	0
Chambers, T. J.	81	8	0
Gorringe, R.	48	18	0
McIlwraith, W.	35	9	0
Millar, C.	40	3	0
Fisher, T.	56	17	0
Diffey, W.	38	7	0
Carter, L.	51	2	0
Bennett, R.	58	8	0
Ford, P.	51	2	0
Rouse, P.	68	2	0
Wakeling, G.	56	7	0
Graham, J.	66	10	0
Walsh, M.	38	7	0
Hook, J.	27	8	0
Horsnell, H.	34	14	0
Anderson, C.	43	16	0
Croskery, J.	49	6	0
Hardy, J.	60	5	0
Neil, J.	44	5	0
Ellis, J. A.	77	0	0
Devlin, H.	36	10	0
Webster, C. A.	58	12	0
Wells, H.	48	0	0
Conley, J.	30	12	4
Timms, J.	38	7	0
Hope, W.	58	9	0
Sinclair, J. J.	43	16	0
Elwood, J.	44	12	0
Tindale, E.	77	0	0
Crawley, W.	87	15	0
Hill, T.	38	7	0
Scott, J.	5	4	0
Paice, G.	60	10	0
Austin, J.	67	16	0
Petrie, J.	95	8	0

(*Continued.*)

Cr. (*Continued.*)

Life allowances paid to—	£	s.	d.
Saundercook, J.	45	13	0
Logan, W.	74	7	0
Brophy, M.	52	19	0
Harris, J.	38	7	0
Fife, A. C.	379	3	0
Brooks, J.	63	0	0
Kelliher, C.	51	2	0
O'Malley, M.	34	14	0
Sim, J.	50	16	0
Gates, S.	38	7	0
Quilici, P.	42	0	0
Leathwick, B. T.	108	10	0
Cooper, R.	56	15	0
Gieseg, H.	40	3	0
Mayer, J. P.	56	12	0
Clarke, W.	81	8	0
Oldham, J. W.	87	0	0
O'Connor, B.	36	10	0
Boyle, J.	36	10	0
Templeton, S.	35	9	0
Elsom, J.	52	3	0
Heinemann, F.	52	19	0
Alexander, W.	132	0	0
Winter, W.	51	3	0
Matheson, J.	52	6	0
O'Callaghan, C.	40	3	0
Voyce, H.	51	2	0
Bolton, W.	60	13	0
Rowse, J.	19	19	0
Potter, T.	56	7	0
McKenzie, S.	49	6	0
Ingles, A.	49	4	0
Sharp, J.	65	15	0
Kirk, A. R.	66	0	0
Ronan, W.	42	0	0
Charles, W.	25	11	0
Taylor, A.	125	0	0
Hoskin, J.	48	1	0
Bishop, C.	48	18	0
Cavanagh, B.	52	19	0
Lawrell, H. W.	94	10	0
Robinson, J.	50	4	0
Collick, U.	42	0	0
Shirley, J. W.	25	9	0
Symons, C.	36	10	0
Collier, C.	67	16	0
Dowrick, W.	56	7	0
Russell, J.	38	7	0
Martin, T.	73	1	0
Stewart, J.	95	0	0
Joyce, T.	51	2	0
Sweeney, B.	40	3	0
Hood, C.	38	7	0
Booker, H.	51	3	0
Burgess, T.	40	3	0
Marcus, C. A.	172	10	0
Gallagher, F.	47	9	0
Galloway, T.	84	18	0
O'Malley, J.	56	12	0
Matthewson, J.	155	0	0
Redpath, J.	67	16	0
Nimmo, T.	73	1	0
Phillips, J.	36	10	0
Wishart, A.	80	13	0
Olson, C. M.	66	0	0
Smith, T.	71	15	0
McCormick, Mrs. A.	51	13	0
Bishop, T.	86	2	0
Graham, H.	35	0	0
Lunham, H.	45	13	0
Barr, W. L.	79	8	0
Mitchell, C. F.	36	10	0
Silva, J.	38	7	0
Tonkin, J.	60	10	0
McIlroy, R.	80	17	0
Burnby, C.	52	19	0
Dowden, A.	47	7	0
Sweet, G.	49	6	0
Olsen, T.	47	9	0
Horne, A.	36	10	0
Smart, T.	58	5	0
Russell, P.	63	5	4
Adams, H.	49	6	0
Stevenson, W.	58	8	0
Moore, R.	77	14	7
Johnson, C. W.	48	0	0
Cocksedge, J.	62	12	0
Wyatt, J.	42	0	0
Peterkin, T. A.	175	15	0
Hillier, W.	121	0	0
Gunner, J.	66	16	0
Allan, P.	54	10	0
McAleer, R. J.	49	11	0
Efford, J. A.	65	15	0
Griffiths, J.	74	12	0
Trevella, S.	64	14	0
Esther, R. T.	30	0	0

(*Continued.*)

Government Railways Superannuation Fund.—Disbursements—*continued.*

Cr. (*Continued.*)

Life allowances paid to—	£	s.	d.
Cairns, W.	65	15	0
Moore, P.	49	6	0
Crisp, J.	70	19	0
Sadler, W.	50	2	0
Gulliver, W. J.	83	0	0
Graham, T.	33	8	0
Woodbury, J.	93	18	0
Bailey, I.	51	3	0
Dewe, E.	54	16	0
Loomes, C.	51	3	0
Course, G.	80	17	0
Tanner, J.	52	19	0
Shann, G.	50	2	0
Shuffill, W.	49	6	0
Power, T.	36	10	0
Fitzgerald, O.	49	6	0
Foster, C.	60	1	0
Fyfe, A.	93	18	0
Cleverley, C.	82	4	0
Alexander, W.	84	10	0
Broad, G.	86	2	0
White, G.	45	0	0
Gordon, J.	54	18	0
Verey, W. A.	65	4	0
Fee, E.	43	16	0
Smeal, W.	66	18	0
Fuller, J.	51	3	0
Tank, R.	49	6	0
Gilbransen, L.	29	4	0
Moore, G.	81	0	0
Frost, J. E.	50	18	0
Horgan, J.	43	16	0
Chapman, G.	77	9	0
Cairns, P.	45	7	0
Mitchell, A.	68	9	0
Hamson, W.	70	17	0
Smith, J.	190	0	0
Finnie, J.	79	9	0
Sheridan, H.	65	15	0
Tull, B.	58	8	0
James, R.	56	12	0
Scott, D.	43	16	0
Ewing, R.	52	1	0
Greenwood, R. W.	54	15	0
Slater, J.	36	2	0
Milroy, J.	54	16	0
Stevens, M.	21	18	0
Mills, C.	43	16	0
Stubbs, A.	79	16	0
Gordine, A.	69	10	0
Whitehead, J.	49	6	0
Harms, N.	51	3	0
Staunton, J.	40	3	0
Newlands, J.	87	13	0
Thompson, W.	27	8	0
Auton, M.	32	4	0
Such, W. P.	80	17	0
Liddell, G.	60	5	0
Fitzhenry, W.	54	16	0
Cockburn, J.	42	0	0
Gibson, L.	62	12	0
Walton, J.	56	12	0
Griffiths, J.	71	15	0
Shinkwin, C.	27	8	0
Delaney, W.	48	16	0
Connal, R.	60	5	0
Eadie, J.	97	1	0
Thorne, G.	40	3	0
Round, E.	69	8	0
Summers, G.	46	11	0
Robertson, A.	60	13	0
Undrill, T.	45	18	0
Wells, W.	64	14	0
Felton, G.	270	16	8
Hart, A.	60	10	0
Verdon, B.	135	13	0
Packman, A.	90	0	0
Ferguson, R.	42	0	0
Dellow, W. S.	68	2	0
Ingram, C. E.	124	13	0
Fowke, T. M.	104	7	0
Cottam, G. H.	113	13	0
Anderson, R.	70	19	0
Wylie, N. B.	63	0	0
Bryant, E.	52	19	0
Hodge, W.	82	3	0
Kulsch, C. A.	81	8	0
Smith, A. G.	62	2	0
Power, W.	51	0	0
Hansen, C.	51	3	0
Draper, G. D.	92	0	0
Osborn, J.	51	3	0
Lobb, J. H.	49	6	0
Staunton, T.	56	12	0
Hutchinson, J. C.	66	18	0
Burke, J.	42	0	0

(*Continued.*)

Cr. (*Continued.*)

Life allowances paid to—	£	s.	d.
Pope, F. J.	67	16	0
Webster, W.	64	6	0
Pedlow, J.	52	19	0
Thomas, J.	106	8	0
Conland, G.	63	16	0
Yardley, T. G.	88	19	0
McKellar, A.	83	7	0
Hislop, J.	63	0	0
McNeil, W. P.	113	13	0
Stephens, W. H.	75	13	0
Cameron, J.	56	12	0
Walsh, L.	45	13	0
Millar, R.	73	19	0
Thacker, H.	88	0	0
Wakelin, W. T.	76	14	0
Symons, J.	66	16	0
Glenny, I. W.	117	7	0
Smyth, R.	43	9	2
Gillman, G. F.	69	0	0
Leamy, J.	21	18	0
Trounce, R. D.	49	6	0
Burgess, J.	37	11	0
Duffy, A.	109	11	0
Frame, J.	150	0	0
Wellsted, G. G.	126	11	9
Mason, W.	103	6	0
Kay, J.	96	0	0
Dineen, D.	52	19	0
Watt, N.	84	18	0
How, C.	103	6	0
Webb, H. J.	103	6	0
Blockley, T.	52	19	0
Stanley, T.	109	11	0
Dumbleton, W.	66	16	0
Beamish, C.	78	5	0
Shardlow, B.	29	15	0
Oliver, H.	43	1	0
Kemp, W.	88	19	0
Dervan, A.	14	12	0
Doherty, J.	66	16	0
Luke, R. H.	56	7	0
Pullin, W.	64	14	0
Wall, W.	52	19	0
McDonald, J.	51	3	0
Barnett, J.	60	1	0
Barber, A.	45	8	0
Sloan, P.	54	16	0
Tate, W.	56	15	0
Loan, J.	56	15	0
Laws, T.	68	9	0
Duncan, R.	62	12	0
Sweetman, F.	46	11	0
Staunton, J.	62	12	0
Crisp, J.	130	0	0
Hollinger, T.	41	16	11
Turnbull, A.	111	14	0
McKelvie, S.	75	2	0
Stewart, J.	100	3	0
Lowe, F. C.	65	15	0
Shaw, F.	66	16	0
Day, F.	39	18	0
McWilliams, A.	170	0	0
Sinclair, A.	102	0	0
Duncan, J.	58	9	0
Piper, J. W.	236	13	0
Snaddon, A.	72	0	0
Joiner, G.	56	12	0
Sparks, J.	76	10	0
Gavey, J.	57	10	0
Holmes, J.	83	9	0
Jones, H. J.	91	13	0
Coom, J.	435	0	0
Gibb, H.	78	5	0
Sloan, W. J.	97	16	0
Chunn, J.	71	15	0
Qualey, M.	36	10	0
Jones, J. F.	109	8	0
Loader, J.	82	3	0
Cory, M.	75	13	0
Butler, J.	79	16	0
Wright, J.	62	12	0
O'Donnell, J.	43	16	0
Dixon, C.	50	2	0
Garrard, G.	66	16	0
Serpless, J.	64	14	0
Power, W. E.	60	0	0
Sherris, J.	127	5	0
Ross, R.	82	3	0
Atyeo, A.	63	0	0
Dennis, T.	107	12	0
Noble, T.	90	8	0
Burton, A.	60	10	0
Whelan, E.	56	7	0
George, E.	95	0	0
Gibson, G.	64	9	0
Brown, D.	70	9	0

(*Continued.*)

GOVERNMENT RAILWAYS SUPERANNUATION FUND.—DISBURSEMENTS—*continued.*

Cr. (*Continued.*)

Life allowances paid to—	£	s.	d.
Williamson, A.	42	4	0
Robertson, J. F.	148	15	0
Semple, W.	45	18	0
Kerr, J.	126	3	0
Hurndell, H.	62	12	0
Mullan, T.	103	2	6
Nicol, J.	99	0	0
Currie, J.	63	2	0
Schneider, F.	87	13	0
Crombie, W.	171	12	0
Hannay, W. M.	252	15	11
Newman, W.	67	3	0
Bowler, P.	54	3	0
Grierson, A.	99	0	0
Kendall, W.	52	3	0
Drennan, J.	104	7	0
Foster, C. H.	99	0	0
Newlands, W.	63	8	0
Hull, H.	77	9	0
Irwin, J.	60	5	0
Patrick, A.	81	6	2
Crutch, C.	160	0	0
Jones, S.	71	10	0
Bartlett, G.	83	4	0
Gillespie, J.	73	1	0
Solomon, W.	45	18	0
Groves, W. W.	68	9	0
Church, J.	84	10	0
Hallberg, H.	52	0	0
Forman, J.	71	10	0
King, W.	54	3	0
White, G. W.	124	13	0
Mealy, M.	77	9	0
Finlayson, P.	65	0	0
Silvester, A.	75	17	0
Mathie, A.	56	7	0
Kennedy, R.	93	18	0
Howe, G.	82	7	0
McLean, J.	123	5	0
Alpe, S.	99	0	0
Barbor, H. W.	91	13	0
Tulloch, J.	82	3	0
Curtin, D.	62	17	0
Carrington, C. J.	63	0	0
Gronwall, H. E.	42	3	0
Kennedy, W.	69	7	0
Mullaney, M.	75	17	0
White, J.	93	7	0
Neilson, T.	96	0	0
Styles, A.	49	17	0
Porteous, G.	82	7	0
Morse, C.	86	13	0
Smith, H.	133	7	0
Murdoch, J.	103	7	0
Illingworth, G.	180	0	0
Purcell, S.	86	13	0
Beagley, J.	62	12	0
Lyons, J.	58	10	0
Day, J.	165	0	0
Green, W. R.	29	4	0
Spring, D.	93	0	0
Auld, E.	39	0	0
McDougall, J.	71	10	0
Griffith, J.	71	10	0
Gall, W.	76	14	0
Williams, A.	130	0	0
Goodall, J.	59	9	0
Cameron, S.	71	10	0
Stewart, R. W.	82	3	0
Hyndman, A.	56	7	0
Healey, L.	77	9	0
Flynn, G. G.	110	17	0
Campbell, C.	25	11	0
Cole, G.	19	10	0
Jelfs, W.	107	12	0
Schulenberg, L.	58	10	0
McNeely, J.	73	13	0
Revell, J. K.	60	5	0
Rodgers, J.	86	2	0
Turnbull, E.	54	3	0
Miller, J.	75	17	0
Moore, S. M.	66	13	0
McIntyre, A.	57	13	0
McLean, D.	113	8	0
McKeown, T.	67	3	0
O'Neill, W.	54	0	0
Bower, J. H.	78	5	0
Grover, E.	73	13	0
Chattaway, R. H.	24	5	0
Fanning, S.	90	0	0
Jenkins, T.	84	15	0
Green, G.	51	3	0
Roberts, W.	61	1	0
McKinnon, J.	58	14	0
Hendren, J.	23	13	0
Slight, J.	107	12	0
Seguin, W.	29	4	0

(*Continued.*)

Cr. (*Continued.*)

Life allowances paid to—	£	s.	d.
Fowke, C. E.	117	8	0
Hepburn, R.	63	8	0
Sherwood, S.	69	16	5
Grant, A.	408	7	0
Keenan, J.	21	13	0
Harrison, J.	62	12	0
Hill, H.	54	3	0
Tilleyshort, C.	93	2	0
Alderton, W. H.	128	7	0
Brown, W.	68	2	0
Watts, C. W.	58	10	0
Eggleton, J.	84	5	0
Brown, A.	88	18	0
Slade, T.	49	17	0
Olver, W.	58	10	0
Burgess, H.	49	17	0
Hynes, T.	86	13	0
Davidson, A.	132	0	0
Brass, J.	117	8	0
Stanton, W.	52	19	0
Weir, R.	104	7	0
Gaynor, G.	58	10	0
Brown, T.	63	0	0
Cussen, M.	56	7	0
Ames, W.	110	17	0
O'Hara, J.	84	10	0
Clark, W. C.	69	13	0
Hunt, T.	64	6	0
Sutherland, J.	69	7	0
Perry, W.	42	5	0
Burbery, C.	56	7	0
Bass, W.	175	0	0
Bryden, R. N.	65	0	0
Robinson, G.	42	3	0
Carter, S. M.	128	7	0
Sinclair, J.	76	14	0
Gichard, W.	69	6	0
Hutchins, T.	63	8	0
Reeve, A. J.	75	2	0
Groves, R.	51	0	0
Atherton, R.	39	0	0
Brough, J.	73	1	0
Johnston, G.	79	18	0
Lepper, C.	67	3	0
Henderson, W. M.	32	17	0
Milne, J.	47	13	0
Pickard, T.	60	13	0
Hancock, H. J.	55	9	0
Stephenson, C.	52	0	0
Rosoman, G.	54	3	0
Butler, E.	73	19	0
McAuliffe, W.	65	0	0
Owen, J.	128	7	0
Long, J.	67	3	0
Bennett, R.	96	0	0
Mockett, S.	73	13	0
Nicholson, S.	136	0	0
Thomson, M. G.	84	6	0
Eadie, J.	58	7	0
Jones, T.	27	8	0
McFarlane, D.	33	3	0
Stimpson, H.	77	9	0
Curson, H.	86	2	0
Stuart, L. J.	110	0	0
Bolton, J.	58	10	0
Diamond, T.	67	3	0
Williams, D.	49	6	0
Jones, J. R.	51	13	0
Lyons, J.	58	10	0
Berry, F. G.	114	2	0
Pascoe, H.	65	15	0
Barr, M.	97	15	0
McGahan, T.	75	17	0
Salisbury, J.	108	0	0
Miller, R.	68	9	0
Curtis, S.	29	15	0
Lowden, D. C.	73	19	0
Climpson, W.	71	15	0
Fraser, A.	69	7	0
Fox, J.	56	7	0
Smith, J. H.	132	0	0
Brooker, T. W.	29	15	0
Ryan, T.	54	3	0
Westbury, G.	69	7	0
Wright, W.	103	6	0
Thomson, D.	114	2	0
Wood, G.	43	7	0
Griffin, W. H.	111	0	0
Black, G.	110	17	0
Vasta, C.	114	2	0
Olive, S. T.	61	1	0
Bratherton, F. G.	97	11	0
McNeill, J.	70	9	0
Payton, R.	45	18	0
Keat, L. I.	114	2	0
Halliday, W.	46	19	0
Aitken, W.	62	17	0

(*Continued.*)

GOVERNMENT RAILWAYS SUPERANNUATION FUND.—DISBURSEMENTS—*continued*

Cr. (*Continued.*)

Life allowances paid to—	£	s.	d.
Steel, J.	64	14	0
Allen, M.	105	0	0
Fleming, J.	26	12	0
Bogle, J. K.	124	13	0
Sleeman, J.	78	0	0
Maxwell, R.	130	16	0
Heald, C. A.	165	15	0
Hughes, S.	100	8	0
Hayward, J.	100	8	0
Wilson, H.	69	7	0
Maloney, T.	52	0	0
Wilson, J.	68	9	0
Hand, J.	62	12	0
Mahon, H.	32	17	0
Turner, E.	77	9	0
Bagley, T.	56	7	0
Durry, G. R.	110	17	0
Sutton, J.	73	13	0
Beale, W.	61	1	0
Holmes, H.	71	4	0
Shadwell, E.	69	7	0
Kane, A.	119	11	0
Derry, C. J.	79	9	0
McLellan, J.	127	10	0
White, J.	61	1	0
Matheson, T.	100	8	0
Stenton, J.	79	6	0
Dawes, F. J.	185	1	0
Martin, J.	65	15	0
McPherson, C.	54	3	0
Davis, W. H.	90	8	0
Mackie, T.	61	16	0
Dallard, G.	69	7	0
Richardson, R.	66	18	0
Sutherland, A.	117	8	0
Amundsen, A.	76	13	0
Rugg, G.	184	3	4
Summerhayes, F.	105	0	0
Aickin, G. G.	201	10	0
Morrison, A. A.	61	0	11
Bowes, W. F.	99	0	0
Johnson, H. R.	195	0	0
Frith, S.	82	3	0
Pepper, W.	58	10	0
Forrester, F.	57	10	0
Dray, A. M.	93	2	0
Paton, T.	143	3	0
Woodham, H.	117	8	0
Watters, J.	64	9	0
Batchelor, W. H.	109	1	0
Breeze, T.	97	11	0
McKearney, D.	56	7	0
Richardson, G.	68	2	0
Ames, H.	71	15	0
Harris, J. D.	226	13	0
Stewart, J.	144	10	0
O'Brien, S.	45	10	0
Bultitude, W. B.	54	13	0
Allardyce, P. J.	42	5	0
Selwood, A. E.	12	10	0
Henry, C.	54	3	0
Pickering, G.	73	3	0
Donaldson, A.	110	10	0
Reynolds, J.	77	0	0
Jenkins, J.	69	8	0
Owen, W. J.	236	13	0
Worsley, C.	180	0	0
Thomas, H. J.	110	17	0
Barnett, R.	84	5	0
Longman, E.	19	4	0
Peck, C.	114	2	0
Polson, J. E.	66	3	0
Peters, W.	54	0	0
Ennis, J.	80	7	0
Conway, J.	100	8	0
Sutherland, J.	74	5	0
McGahan, J.	81	3	0
Eades, J.	83	0	0
Hardcastle, G.	51	0	0
Cartwright, J.	69	3	0
Stent, J.	78	17	0
Reeves, C. A.	128	0	0
Craig, J.	95	8	0
Davis, E.	63	2	0
Angus, W. C.	60	5	0
Stephens, W. B.	61	11	0
Morrison, I.	140	17	0
Dawsett, T.	71	18	10
Coxon, R. A.		..	
Harvey, J.	87	0	0
Norman, H.	104	1	2
Livingstone, J.	41	4	9
Berrett, T.	77	14	0
McGowan, J.	98	17	0
Sings, W.	67	1	0
Mitchell, W.	73	15	1
Allan, A.	180	1	0
Gilby, J. E.	111	8	11

(*Continued.*)

Cr. (*Continued.*)

Life allowances paid to—	£	s.	d.
Williams, W. H.	65	17	8
Gorman, J.	62	5	0
Wilson, J. C.	85	7	8
Quinn, W.	75	11	4
Murphy, J.	61	7	4
Swann, R.	88	9	3
Sharpe, J. O.	49	5	4
Brown, G.	114	5	3
Condell, W.	55	3	9
O'Brien, S.	45	2	11
Marshall, C.	116	9	3
Foster, R.	54	18	2
Milroy, T.	117	3	7
Twomey, P.	3	19	4
Crozier, W.	56	18	8
Hardy, A.	108	15	0
Kavanagh, E.	56	11	5
Ashley, J.	205	19	1
Drew, G.	61	5	11
Patterson, W.	80	11	10
Wells, J.	126	5	2
Tomlin, E.	41	15	7
O'Connor, M.	61	0	4
Finlin, A.	51	4	7
Quartermaine, E. G.	66	0	6
Henley, J.	98	19	6
Timmins, J.	60	3	6
Dunnill, J.	48	18	3
Bowles, J. W.	98	6	7
Matheson, J.	29	19	8
Weir, J.	1	6	0
Hall, W. J.	78	3	9
Findlay, J.	80	18	9
Stephenson, R.	58	9	8
Petherick, G.	51	0	10
McKay, H.	96	5	10
Day, H. J.	88	1	10
Steffensen, M.	58	4	1
Nelson, G.	35	19	5
Hutton, T.	46	13	4
Walker, G.	31	5	0
Maugham, T.	35	14	9
Hall, S.	37	5	7
Aplin, R.	17	10	0
McKechnie, J.	58	13	1
Parr, J.	47	8	10
Thomas, E. F.	0	6	4
Dinan, B.	25	18	9
Finnerty, R.	39	10	8
Townson, R.	39	6	6
Fraser, J.	51	11	0
Sherwood, C. W.	40	15	0
Harry, N. M.	25	17	1
Cairns, A. E.	34	18	4
Steel, G.	28	12	9
Reid, J.	11	9	2
Dougherty, D.	23	15	10
Milton, W.	23	9	8
Bernard, C. E.	49	10	7
Williams, A.	33	12	8
Carr, W.	19	9	2
Mechaelis, R.	29	3	1
Maunder, A.	27	7	4
McLean, W. F.	21	14	3
Graham, A.	52	5	4
Wellings, G.	102	10	0
Smith, G.	20	0	11
Burton, H.	36	0	3
Hinde, F.	18	15	9
Tredennick, S.	19	11	5
McQuillan, E.	18	2	11
Curtis, J.	22	0	7
Black, G. R.	27	11	0
Thompson, R.	14	1	11
Gray, R.	10	1	4
Peryer, M.	23	5	9
Wallace, W.	13	16	0
Haynes, H. N.	19	5	10
Gibson, R.	21	4	1
Hannay, W.	34	11	3
Campbell, A.	8	4	4
Taylor, D.	3	9	0
Irvine, L.	10	3	7
Hall, T.	7	4	10
Williams, J.	8	2	0
Baxter, J.	4	16	6
Berry, H.	4	18	4
Symonds, F.	3	4	10
Chisholm, D. E.	77	6	0
Walters, J.	55	13	10
Neville, P.	73	0	10
Firth, N.	34	2	3
Fisher, C.	3	19	5
Lowney, M.	14	3	7
Manhire, R.	3	10	7
O'Brien, M.	2	4	7
Sadler, R.	19	17	11
King, F. W.	26	3	0

(*Continued.*)

GOVERNMENT RAILWAYS SUPERANNUATION FUND.—DISBURSEMENTS—*continued.*

Cr. (*Continued.*)

Life allowances paid to—				£	s.	d.
Richards, D.				57	18	0
Young, T.				87	13	0
Ashby, T.				41	1	8
Moir, R.				18	12	0
Dixon, H.				55	11	6
Emerson, T.				3	11	6
Stagg, W.				16	0	8
Varcoe, J.				27	11	7
Evans, R.				47	4	11
Miller, J.				54	6	11
Sellars, G.				0	18	7
Ramage, R.				48	9	3
Dow, R.				9	15	8
Robins, G.				29	4	0
Barry, M.				7	3	0
Pert, J.				12	5	6
Wilson, G. G.				75	13	6
Macdonald, A. V.				123	6	6
Arthur, T.				331	3	5
Moreland, J.				6	3	5
Aubrey, A.				48	15	0
Handisides, D.				74	12	8
Instone, J.				7	16	6
Vickery, A. T.				55	0	0
Heywood, W.				8	13	6
Court, T.				15	5	8
Biggs, W, A.				5	6	10
Thomson, G. E.				5	17	5
Porter, W.				37	17	7
Connolly, P.				5	12	4
Bryant, W.				10	8	3
				55,414	4	2
Less repayment to Fund—	£	s.	d.			
Eccles, T.	6	1	9			
				6	1	9
				55,408	2	5

Allowances paid to widows and orphans for period 17th March, 1912, to 15th March, 1913 (52 weeks)—	£	s.	d.
Children (two) of the late W. G. Sherburd	26	0	0
Saddler, M.	17	19	1
Lewis, A. E., and child	30	19	1
Levett, K.	17	19	1
Johnsen, I. M.	17	19	1
Long, M.	17	19	1
Murie, J.	17	19	1
McDowell, R. A., and three children	52	6	11
Evans, E. J.	17	19	1
Buchanan, M. G.	17	19	1
Murphy, M. A.	17	19	1
Lawson, M.	17	19	1
Meager, K. A.	17	19	1
Martin, A., and child	30	19	1
Johnston, M.	16	11	5
Nelson, M.	17	19	1
Meredith, A.	17	19	1
Haynes, S.	17	19	1
Fleming, W. A., and child	19	2	8
Kelly, C. M., and two children	43	19	1
Orr, J.	17	19	1
Murchie, S. M., and child	30	19	1
Bracefield, J.	17	19	1
Wheeler, C., and child	30	19	1
Gilmer, E. M.	17	19	1
Bain, C. J.	17	19	1
Children (two) of the late G. Elliott	26	0	0
Dowland, A.	17	19	1
Pedlow, R., and two children	42	9	10
Dunn, A., and two children	43	19	1
Close, M.	17	19	1
Children (two) of the late D. Haining	26	0	0
Ruane, J., and three children	48	14	1
Venn, M. J.	17	19	1
Keyte, E.	17	19	1
Children (two) of the late J. S. Smith	26	0	0
Walton, E.	17	19	1
Children (three) of the late W. H. Thomas	39	0	0
McPherson, M.	17	19	1
Child of the late T. Smith	12	18	7
Gifford, M. M.	17	10	0
Meadowcroft, E., and three children	56	19	1
Child of the late A. R. Reed	13	0	0
Jamieson, M. J.	17	19	1
Child of the late F. W. Styles	13	0	0
Stewart, E. M., and two children	43	19	1
Muir, R.	17	19	1
Beaton, E., and three children	56	19	1
Chalmers, A.	17	19	1
Nixon, M.	17	19	1
McChesney, C.	17	19	1
Colthorpe, E., and child	30	19	1

(*Continued.*)

Cr. (*Continued.*)

Allowances paid to widows and orphans for period 17th March, 1912, to 15th March, 1913 (52 weeks)—*continued.*	£	s.	d.
Jones, A. B., and child	30	19	1
Children (four) of the late C. Clare	49	2	10
Froggatt, L. A.	17	19	1
Children (two) of the late C. Sheehan	26	0	0
Children (two) of the late W. H. D. Warren	14	13	7
Layton, E.	17	19	1
Hastings, A., and four children	69	19	1
McCullough, S.	17	19	1
Bryant, H., and two children	43	19	1
Brown, H., and two children	41	16	3
Abraham, E. A.	17	19	1
Holland, A., and child	30	19	1
Nicol, L.	17	19	1
Maher, M. L., and two children	43	19	1
Lawson, E.	17	19	1
Children (three) of the late J. Thornton	30	18	7
Edwards, M. E., and two children	43	19	1
Livingstone, M. C., and child	24	16	1
Cole, M. A.	17	19	1
Alexander, H. E., and child	30	19	1
Jonas, M., and child	30	19	1
Seaman, C. M.	17	19	1
Hood, A.	17	19	1
Shannon, A., and three children	56	19	1
Sullivan, M., and two children	43	19	1
Yates, M., and two children	43	19	1
Richards, A. J., and two children	43	19	1
Moore, M. A., and two children	38	19	10
Hesp, S. A.	17	19	1
Children (two) of the late W. J. Horne	26	0	0
Children (two) of the late P. McCarty	26	0	0
Syms, E. M.	17	19	1
Young, A., and child	30	19	1
Children (three) of the late J. Bennett	33	9	3
McNab, C.	17	19	1
O'Reilly, E., and six children	85	17	8
MacCurdy, C. E., and two children	43	19	1
Dolan, M.	17	19	1
Evans, M., and two children	43	19	1
Turner, B. C., and child	30	19	1
Dickson, I., and two children	33	2	11
Children (three) of the late P. McDonnell	39	0	0
Children (three) of the late W. Mundy	39	0	0
Andrews, M. L., and two children	41	4	1
Child of the late G. B. Monson	13	0	0
Galvin, M.	17	19	1
Watt, M.	17	19	1
Robinson, E.	17	19	1
Andrews, S. A.	17	19	1
Children (two) of late C. W. Wise	26	0	0
Smith, M.	17	19	1
Stirling, M.	17	19	1
Martin, J., and four children	69	19	1
Durrant, E. A., and two children	43	13	4
Greig, S. E.	17	19	1
Heycock, C. G. H., and two children	40	11	5
Armstrong, M., and three children	56	19	1
Denison, M. J., and child	30	19	1
Lewton, J. E., and child	30	19	1
Carter, E.	17	19	1
Byrne, E. L., and child	30	19	1
Faulkner, M. T., and three children	51	15	6
Schrader, E.	17	19	1
Cooper, M. A.	17	19	1
Sammons, C.	17	19	1
Winter, A. H. S.	17	19	1
Robb, M.	17	19	1
McNeil, C., and five children	82	19	1
Campbell, E. J.	17	19	1
Thomson, A., and two children	43	19	1
Hanlon, M. E., and five children	75	16	11
Courtney, G. A., and three children	51	9	1
Cairns, R., and six children	95	19	1
Walker, E., and child	30	19	1
Keleher, M.	17	19	1
Shaw, M. J., and two children	43	19	1
Edge, J. S., and three children	56	19	1
Child of the late J. Major	13	0	0
McGregor, E.	17	19	1
Clark, K., and two children	43	19	1
Davies, L., and two children	43	19	1
Young, L. M., and two children	43	19	1
Templeton, E. J., and two children	43	19	1
Forrester, G.	17	19	1
Guy, A. F., and four children	61	8	4
Allan, M., and child	22	4	1
Tasker, E. P., and child	30	19	1
Sole, O. E., and four children	69	19	1
Taylor, A., and two children	29	18	10
Redway, E.	17	19	1
Dambrogio, H. A., and three children	56	19	1
Children (six) of the late J. Smitheram	70	1	5
Fromont, C. E., and five children	82	19	1

(*Continued.*)

GOVERNMENT RAILWAYS SUPERANNUATION FUND.—DISBURSEMENTS—*continued.*

Cr. (*Continued.*)

Allowances paid to widows and orphans for period 17th March, 1912, to 15th March, 1913 (52 weeks)—*continued.*

	£	s.	d.
Wakefield, S. E. M., and two children ..	43	19	1
Taylor, M., and three children ..	56	19	1
Gaitt, M. E., and two children ..	39	7	3
Edwards, G. A., and child	30	19	1
Frei, E.	17	19	1
Morrell, A. A., and five children ..	82	18	4
Archer, L. E.	17	19	1
Barry, A.	17	19	1
Rooks, A., sen.	17	19	1
Macfarlane, W. G. M., and two children	43	19	1
Children (six) of the late J. Kennelly	72	16	5
Kennedy, M. A.	17	19	1
Pringle, E., and child	30	19	1
Palmer, A., and two children	43	19	1
Flint, M. A., and two children ..	43	19	1
Thessman, J., and three children ..	56	19	1
Robertson, M.	17	19	1
Styles, M.	17	19	1
Giles, A. M. G., and four children ..	69	19	1
Millward, A. M. C., and child	28	11	5
Chambers, J., and two children ..	43	19	1
Louden, E. S., and four children ..	61	1	3
Curtin, A.	17	19	1
Sherriff, B.	17	19	1
Branford, M., and child	30	19	1
Maclennan, J. J., and three children ..	56	19	1
Southern, M. E.	17	19	1
Clark, C. E.	17	19	1
Mitchell, M. A., and child	19	19	10
Dawson, M. M.	17	19	1
Woolcock, N., and two children ..	43	19	1
Ryan, M. A., and two children ..	43	19	1
Carradus, E., and six children ..	95	19	1
Hanley, K., and child	28	1	3
Hislop, M. L.	17	19	1
Humphrey, H. M. J., and two children	43	19	1
McDonnell, C. McA.	17	17	6
Children (three) of the late H. Nelson ..	38	3	7
Nolan, A. J., and child	27	9	1
Children (four) of the late A. P. Hickey	72	2	10
Hasselburg, R. M., and child	37	13	7
Osborn, M. A.	20	9	9
Abbott, E. P., and child	32	14	9
Steedman, E. M., and child	28	6	11
Boyer, F. E., and four children ..	55	14	9
Jackson, L. A., and four children ..	46	15	5
Hargreaves, S. E. M., and two children	50	15	3
Dinnison, E., and child	29	0	0
Simpson, E. M. M., and four children ..	38	12	4
Naylor, M., and child	10	9	4
Taylor, S. S.	5	13	0
Butts, E. A. J.	17	1	4
McDuff, M. E.	15	18	10
Kerr, E.	12	8	5
Watkin, A.	17	19	1
Allan, J. H.	11	0	9
Bell, E. C.	2	16	2
Irvine, A.	9	6	2
	6,488	16	2

Payments to legal representatives of the under-named deceased beneficiaries under the provisions of section 82 (6) of the Government Railways Act, 1908, viz.:—

	£	s.	d.	£	s.	d.
Late E. G. C. Burge—						
Contributions	137	1	9			
Compensation	130	7	8			
				267	9	5

Payments to legal representatives of the under-named deceased beneficiaries under the provisions of section 86 (*c*) of the Government Railways Act, 1908, viz.:—

	£	s.	d.	£	s.	d.
Late Joseph Instone—						
Contributions	125	6	6			
Compensation	Nil					
	125	6	6			
Less superannuation allowance paid	120	18	2	4	8	4

Cr. (*Continued.*)

Payments to legal representatives of the under-named deceased beneficiaries under the provisions of section 86 (*c*) of the Government Railways Act, 1908, viz.—*continued.*

	£	s.	d.	£	s.	d.
Late W. Heywood—						
Contributions	70	11	7			
Compensation	Nil					
	70	11	7			
Less superannuation allowance paid	32	2	11	38	8	8
Late G. E. Thomson—						
Contributions	32	6	6			
Compensation	Nil					
	32	6	6			
Less superannuation allowance paid	5	17	5	26	9	1
Late T. Court—						
Contributions	273	6	0			
Compensation	93	14	9			
	367	0	9			
Less superannuation allowance paid	28	11	11	338	8	10
Late J. Skeats—						
Contributions	79	0	10			
Compensation	Nil					
	79	0	10			
Less superannuation allowance paid	24	12	7	54	8	3
Late W. A. Biggs—						
Contributions	39	8	4			
Compensation	Nil					
	39	8	4			
Less superannuation allowance paid	5	6	10	34	1	6
Late A. V. Macdonald—						
Contributions	262	17	8			
Compensation	596	13	7			
	859	11	3			
Less superannuation allowance paid	780	7	11	79	3	4
Late P. Connolly—						
Contributions	61	8	11			
Compensation	Nil					
	61	8	11			
Less superannuation allowance paid	5	12	4	55	16	7
Late W. Porter—						
Contributions	137	15	11			
Compensation	Nil					
	137	15	11			
Less superannuation allowance paid	37	17	7	99	18	4

	£	s.	d.
Contributions refunded to members who have left the service	9,330	5	0
Fines remitted and refunded	10	12	6
Travelling-expenses of members of Board attending quarterly meetings	32	5	6
Contributions transferred to Public Service Superannuation Fund	52	0	4
Public Trust Office charges	211	15	0
Balance of receipts over disbursements ..	257,319	4	6
	£329,851	13	9

W. H. HERRIES,
Chairman of the Government Railways
Superannuation Fund Board.

H. DAVIDSON,
Chief Accountant, New Zealand Railways.

Examined and found correct.—ROBERT J. COLLINS,
2nd June, 1913. Controller and Auditor-General.

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GOVERNMENT RAILWAYS SUPERANNUATION FUND:

REPORT BY THE ACTUARY, SHOWING THE RESULTS OF AN ACTUARIAL INVESTIGATION INTO THE FINANCIAL POSITION OF THE GOVERNMENT RAILWAYS SUPERANNUATION FUND AS AT 31st MARCH, 1912.

Laid on the Table by Leave of the House.

REPORT.

Wellington, 21st October, 1913.

1. In accordance with the decision of Cabinet, dated the 31st August, 1912, I have made an actuarial examination of the Government Railways Superannuation Fund. The intention to order this investigation and the reasons which render such a course desirable were outlined in the Financial Statement of last year in the following terms :—

> "The Government has no intention of destroying the benefits derivable by the railway "employees through the operation of the Act which provides for their superannuation. At "the same time it is wise that the country should know when it enters upon these schemes "what responsibilities they entail, and Parliament should make provision that the charges "which must ultimately come upon the taxpayer should be known, in order that the tax-"payer of the day should shoulder his fair share of the burden and not leave the whole "liability to posterity. With this end in view, the Government intend to have an actuarial "examination of the Railways Superannuation Fund made, thus bringing it into line in this "respect with the Public Service and teachers' superannuation schemes."

2. Having been charged with the duty of actuarially investigating the Fund I considered that the examination should be as full and complete as in the statutory triennial investigations of the Public Service and Teachers' Funds two years ago. It is true that in the case of the Railways Fund there is no statutory obligation to do so, but bearing in mind the paragraph of the Financial Statement which I have quoted above I sought and obtained the approval of the Minister of Finance to the investigation being of the same complete and exhaustive character. I have also been able to give, in the appendix to this report, full statistical and actuarial tables concerning the experience of the Fund, because even those which are of a purely technical nature afford information which will be of interest to others who are concerned in superannuation matters, and with the triennially accumulating experience of these large funds they will eventually give information of considerable value.

3. Being fully aware that an actuarial report, to be of any real use, should be presented as soon as possible after the date to which the investigation is brought down, I would make it clear that the term of eighteen months which has elapsed since the date to which the results are brought down is not in any way excessive under the circumstances. The last financial year of the period reviewed ended on the 31st March, 1912, and the decision to have an investigation was come to on the 31st August, 1912. Without any delay arrangements were made with the Chief Accountant of the Railways to have 14,000 cards printed and the necessary data extracted from the Railway records. These cards were completed and handed to me on the 31st March, 1913. As the Fund has been in existence almost ten years and this was the first time such cards had been prepared, I consider that the Chief Accountant (Mr. Davidson) may be complimented on the accuracy and businesslike promptitude with which the work was done. The complicated valuation of the Fund was then carried out in the Actuarial Branch of the Government Insurance Department and finished in six months, the cards being returned to the Railways Department for future use on the 30th ultimo, since which date I have been engaged in preparing this report.

4. The Government Railways Superannuation Fund Act, 1902 (now embodied in the Government Railways Act, 1908), which came into operation on the 1st January, 1903, established a superannuation fund for persons permanently employed in any capacity by the Railways Department. The scheme, although optional on the part of those qualified to become contributors upon the coming into operation of the Act, is compulsory with respect to all persons who are afterwards first permanently employed in any capacity by the Department. It is administered by a Board of nine members, con-

sisting of the Minister of Railways, the General Manager of Railways, the Solicitor-General, the Public Trustee, two contributors elected from the First (or salaried) Division, and three contributors elected from the Second (or wages) Division.

5. This was the first of the three existing large funds which were established for the superannuation of public servants, and in its original form it differed in some respects from the two others which were formed a few years later.

(*a.*) There was no subsidy, but the Act contained a guarantee to the effect that "in the event of the Fund at any time being unable to meet the charges upon it" the deficiency should be met by the Consolidated Fund. The guarantee thus given would throw any deficiency entirely on the future and from the nature of things could not be regarded as satisfactory. The mere fact of a deficiency not being brought to light for a long period would only augment the difficulties which must eventually arise. Long before a cash deficit was actually disclosed any superannuation fund would probably be hopelessly insolvent, and could only be financially rehabilitated by grants greatly in excess of what the future should properly be called upon to bear. Fortunately, a substantial subsidy was granted by an Act passed seven years later, which in this respect placed the Fund more on a par with the other funds at that time. There is, however, still no provision made for periodical valuations, nor for the gradual increase in the subsidy which must inevitably be provided for all of these funds, and the sooner the better in order to ensure equal justice to all and prevent serious trouble in the future.

(*b.*) All the contributors under age fifty paid on a 2-per-cent. lower basis than in the other two funds, the contributions ranging from 3 per cent. to 7 per cent. of salary according to age at entry as against 5 per cent. to 9 per cent. The Railway Fund was, however, also placed on this latter basis in 1908, but only so far as future contributors were concerned, it being of course impossible to increase the contributions of those who were already members of the Fund.

(*c.*) In another important respect this Fund differs from the later ones, in that only the widows of contributors who never entered upon their pensions receive the usual small family annuities, the widows of pensioners receiving no allowance of this kind on the death of their husbands. I have been able to estimate conclusively that the relief to the Fund through the omission of this benefit to existing contributors rather more than counterbalances the extra liability involved in the deficient contributions referred to in (*b*). I should mention that there is a strong desire, not unnaturally, that this omitted benefit for the widows of pensioners should be included in the scheme.

6. Particulars of the contributions and benefits provided by the Act, with statements of active membership, discontinuance of membership from various causes, and the progress of pensions for each year, will be found in Tables I, II, and III of the appendix to this report.* The ages of the contributors at date of valuation, with their annual contributions and other particulars, are shown in Table IV, and the ages at which pensions have been granted in Table V.

7. In addition to 431 widows and children, who are drawing small annuities amounting to £6,463 per annum, the number of retired contributors on the Fund at the 31st March, 1912, was 714, and their pensions amounted to £52,463 per annum, giving an average pension of £73 9s. 6d. The number of active contributors at the same date was 9,248, with aggregate annual salaries amounting to £1,425,117, and paying contributions at the rate of £61,621 per annum.

8. Before dealing with the results of the investigation, I will as briefly as possible explain the valuation basis—or, in other words, the various assumptions which have been made in estimating the future progress of the Fund. The average yearly rates of interest earned by the Fund during the five years ending 31st March, 1912, were respectively £4 10s. 2d., £4 12s. 5d., £4 14s., £4 17s., and £4 7s. 2d. per cent. Considering the nature and circumstances of the Fund, I do not think it is advisable to assume a lower financial basis than 4 per cent., and this rate has been used in the valuation.

The Experience Table (Table VI) contains the rates per cent. per annum of withdrawal, mortality, retirement, and increase of salary. All these rates have been taken from the actual experience of the Fund, and from them have been constructed the Life and Service Table (Table VII), showing for the First and Second Divisions separately, out of 100,000 entering at age 15, the numbers who will withdraw, die, and retire in each year. This Life and Service Table forms the basis of the present calculations with reference to the Fund.

In regard to the mortality of contributors, it has been found practicable to utilize the experience of the Fund itself, but in regard to the mortality of pensioners the experience of the Fund was too small and irregular. It has, therefore, been considered suitable to take King's rates of mortality amongst superannuated members (J.I.A. XXXIX) for the younger ages, joining on to Farr's Healthy English Males at age 75.

In this Fund it is optional to retire at age 60, and compulsory at age 65, beyond which age there are practically no contributors remaining in the Service, and it is assumed that by then all will have retired.

For valuing the widows' and children's benefits the latest New Zealand marriage statistics and the living from the New Zealand census were combined with Farr's Healthy English Females' mortality.

9. There is no statutory obligation, as in the case of the Public Service and Teachers' Funds, to estimate "the probable annual sums required by the Fund to provide the retiring and other allowances falling due within the ensuing three years without affecting or having recourse to the actuarial reserve appertaining to the contributors' contributions," but I have been particularly careful to make this

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* The statistics contained in the appendix were compiled from the railway superannuation cards, now written up for the first time, and differ slightly from the statistics contained in the yearly reports of the Railway Superannuation Board. These unavoidable small differences will not effect the value of the statistics in the slightest.

estimate on the present occasion, as it defines very clearly what should be done "in order that the taxpayer of the day should shoulder his fair share of the burden" as laid down in the Financial Statement. The following is the result:—

Required for	1912–13.	1913–14.	1914–15.
	£	£	£
Current ordinary pensions	51,273	47,390	43,768
Prospective pensions to existing contributors now over pension age ..	1,214	1,127	1,048
New pensions, family pensions, and miscellaneous benefits ..	9,596	16,008	22,736
Total sums required for retiring and other allowances ..	62,083	64,525	67,552
Deduct amount provided by contributors' contributions without having recourse to the actuarial reserve appertaining thereto	13,901	15,409	17,164
Subsidies required for ensuing three years	£48,182	£49,116	£50,388

It will be seen, therefore, that instead of the subsidy of £25,000 per annum now being paid the Fund requires a subsidy of about £50,000 per annum at the present time. I do not, however, propose that the subsidy should be increased this year, as it will be seen further on that I suggest the amalgamation of the three funds (Public Service, Teachers', and Railways) in certain respects, in order to secure uniformity of treatment financially; and if effect be given to my recommendations next year, that will be a more convenient and appropriate time to place the subsidy to the combined funds on an entirely different footing of a more permanent nature.

10. From an inspection of Table VIII it will be noticed that, even at the present higher rates, ranging from 5 per cent. upwards, the contributions are insufficient to secure all the benefits afforded by the Fund. The only effective way of ascertaining how far the total contributions fall short of providing the whole of the benefits is, as has been explained in a previous report, by means of an ordinary actuarial valuation. Following this method the whole of the liabilities and assets are brought to account, the liabilities consisting of the present value of the benefits (*i.e.*, the benefits which will accrue to contributors at future dates duly discounted as at the present date), and the assets consisting of (1) the accumulated funds, (2) the present value of the members' future contributions, (3) the present value of the existing Government subsidy, (4) the present value of the increase in the Government subsidy now found to be necessary, and (5) the present value of future increases in Government subsidy to be provided from time to time.

11. From the resulting valuation balance-sheet, which appears in Table XI, it will be seen that the real assets amount to £1,591,343, consisting of £233,457 accumulated funds, £732,886 present value of the future contributions of existing members, and £625,000 present value of £25,000 annual subsidy already granted. In addition to this there is required, in order to balance with the liabilities, £625,000 the present value of a further subsidy of £25,000 now reported as necessary, and £526,851 the present value of increases in the subsidy which will be necessary in the future. It is noticeable that the last item compares very closely with the present value of the future increases in subsidy necessary for the Public Service Fund, which its last valuation showed to be £532,108 (1912, H.-26a, par. 13). Indeed, it will be seen that, although this Fund differs in important respects from the Public Service Fund, the financial position of the two funds shows much similarity. That this Fund compares so well with the Public Service Fund, considering its greater age, its lower rates of contribution, and the earlier age at which its contributors may retire on pension, is largely accounted for by four causes—(*a*) No pensions to the widows of pensioners, as already explained; (*b*) a much higher rate of withdrawal in the Second Division, which comprises the main body of the railway men; (*c*) a smaller average of back service, and also (*d*) a smaller rate of annual increase of salary in the same division.

12. It will be seen from what I have said that with an additional annual subsidy of £25,000 this Fund would be put in a satisfactory position, to maintain which, however, a triennial valuation in future must be arranged for with the resulting periodical adjustment of the subsidy. When this has been done I shall for the first time be able to say unreservedly that the whole of these funds are on a satisfactory actuarial basis. The method of providing the subsidies, however, is capable of improvement. The foundation of the Public Service Superannuation Fund six years ago marked a distinct advance in the actuarial treatment of such funds in New Zealand, and the chief object I had in view was to arrange the subsidy on a scale which would divide the burden equitably between the taxpayer of to-day and posterity. Having little or no actual experience at that time to go upon I adopted the most feasible actuarial arrangement I could devise for ascertaining from time to time how much of the yearly charges of the Fund should be met by the Superannuation Fund itself and how much should be taken from the Consolidated Fund. The working of the method is very troublesome, and requires the application of much care and skill by the leading officers of the actuarial staff, but I believe, and have heard nothing to lessen that belief, that the effect has been an equitable division of the cost.

13. There are, however, evident objections to the practice of finding out, by means of intricate triennial calculations, how much further Government assistance is wanted, and continually asking for irregular special increases in the subsidies. I have known that this would be unavoidable until the Railways Fund should have been actuarially examined, but that Fund's first valuation having now been completed with satisfactory results, covering a period of nearly ten years, the experience thus obtained, together with that afforded by the other two funds, enables me to make a reasonable forecast of the

permanent subsidy required for the whole of the funds; the usual triennial valuations still being necessary, but merely in order to confirm the forecast, and demonstrate that the funds are solvent without the need of any further provision being made.

14. I think it is now a very appropriate time to consider whether the three existing funds cannot be brought more into line with one another in some respects than at present; indeed, it is very desirable that there should be some amalgamation of their finances before attempting to simplify and improve the method of subsidizing them. To facilitate the consideration of this matter it will be useful to briefly describe how they are at present controlled. The three funds are administered separately by three Boards composed as follows:—

Railways Fund (founded 1902)—
 The Minister of Railways;
 The Solicitor-General;
 The Public Trustee;
 The General Manager of Government Railways;
 Five elected contributors—two from First Division, three from Second Division.
 (Nine members.)

Teachers' Fund (founded 1905)—
 The Minister of Education;
 The Solicitor-General;
 The Public Trustee;
 The Secretary to the Treasury;
 The Inspector-General of Schools;
 The President of the New Zealand Educational Institute;
 Four elected contributors—two from the North Island, two from the South Island.
 (Ten members.)

Public Service Fund (including Post Office and Police) (founded 1907)—
 A Minister of the Crown (at present the Minister of Internal Affairs);
 Four persons nominated by the Government, at present being—The Government Insurance Commissioner, the Under-Secretary for Public Works, the Under-Secretary of Lands and Survey, and the Superintendent of Government Advances to Settlers;
 Six elected contributors—two from the Post and Telegraph Department, one from the Police Department, three from other Departments.
 (Eleven members.)

The affairs of each fund are administered by its particular Board, except in regard to investments, all moneys being handed over to the Public Trustee. Formerly these funds were specially invested by the Public Trustee and were thus enabled to earn 4½ per cent. or more, but owing to a more recent arrangement that has been made they are now barely able to earn 4¼ per cent. When it is considered that the Government Insurance Board (composed of the Minister of Finance, the Government Insurance Commissioner, the Surveyor-General, the Solicitor-General, the Public Trustee, and the Superintendent of Government Advances to Settlers) has at the present time no difficulty in placing its surplus funds available for investment in securities, at rates averaging over 5 per cent. (5½ per cent. for mortgages and 5 per cent. on local bodies debentures), it will be clear that, even allowing for expenses of administration, the superannuation funds are not earning as much as they might do.

15. The present system of administering the Superannuation Funds by three special Boards is undoubtedly a good one in the early and experimental stage of their careers, because the interests of railway men, teachers, postal officials, policemen, and Civil servants generally are then better dealt with by men possessing an intimate knowledge of the special circumstances of each particular class. To take the case of the teachers, for example: it may be suggested that the terms of their employment under Education Boards throughout the country will cause circumstances to arise which are likely to receive fairer treatment if their superannuation affairs are administered by a body of men specially chosen for their familiarity with the teachers and their surroundings.

16. I do not, therefore, now suggest any alteration of the present system in this respect, but I certainly think that the financial control of the three Superannuation Funds might with much advantage be centralized in one small body of specially qualified men under the Finance Minister, to which body I should entrust the investments and actuarial treatment of the combined funds. If this were done, it would not only secure a better return from interest on the investments, but would also allow the three funds to be dealt with actuarially as a whole, and permit the convenient application of the simpler form of subsidy explained in paragraph 18.

17. The following was the approximate position, in certain respects, of the separate and combined funds at the close of their last year:—

Fund.	Number of Contributors.	Yearly Salaries.	Yearly Contributions.	Yearly Subsidies.	
				Actuarial.	Actual.
		£	£	£	£
Teachers'	3,641	628,789	40,213	17,090	17,000
Public Service	10,027	1,666,231	109,840	47,525	48,000
Railways	9,470	1,582,965	68,068	48,182	25,000
Total	23,138	£3,877,985	£218,121	£112,797	£90,000

It will be seen from the above that 23,138 servants of the State paid in to the Superannuation Funds last year as deductions from their salaries the sum of £218,121, which is equivalent to 5·6 per cent. of their total salaries, amounting to £3,877,985. It will also be seen that the total subsidy required for the year was £112,797, which is equivalent to 2·9 per cent. of the total salaries. Thus the State's subsidy is a fraction more than one-half of the members' own contributions.

18. The second statutory triennial valuations of the Public Service and Teachers' Funds fall to be made as at the end of this year, the results of which I hope will be available fairly early next session, and subject to their not disclosing any unexpected difficulty I can recommend that a regular annual subsidy of 3 per cent. of the total salaries of contributors be paid into the combined funds. I shall also be able to say that it may be looked upon with a degree of confidence approaching to certainty that the rate will not be raised in future. One great advantage of the method, indeed, in addition to its simplicity, is that for a very long time 3 per cent. of total salaries, though providing a regular and reasonable increase in the yearly subsidy in strict accordance with the actual increase in salaries, will remain a fixed percentage, and any change which may arise in the future will be in the direction of a lower percentage.

19. At the present time the financial years of the three funds do not coincide, the Railways closing on the 31st March and the other two running with the calendar year. When making the proposed financial amalgamation it would be very desirable that they should be on the same footing in this respect. I understand from the Chief Accountant of the Railways that there would be great practical difficulty in the way of changing the Railway Fund's year to end with the calendar year, and he suggests that the Public Service and Teachers' Funds should close their accounts on 31st March each year. It seems a good suggestion and one that will meet the difficulty. It appears to me, indeed, that there might even be some advantage in the accounts of such Government funds coinciding with the accounts of the General Government in this respect.

20. In order to carry out what I have in view I propose that a Government Superannuation Fund Bill be prepared during the recess. The first part of the Bill should deal with the finances of the combined funds, constituting a Government Superannuation Fund Board, of somewhat similar composition to the Government Insurance Board, under the chairmanship of the Minister of Finance.

This part of the Bill should provide, *inter alia*, (*a*) that all moneys of the Railways Superannuation Fund, the Teachers' Superannuation Fund, and the Public Service Superannuation Fund should be handed over to the Government Superannuation Fund Board for investment; (*b*) that an actuarial examination of the Government Superannuation Fund should be made by the Actuary as at the 31st March, 1915, and for each triennial period thereafter; (*c*) that in the month of April in each year the Minister of Finance should pay into the Government Superannuation Fund and out of the Consolidated Fund, without further appropriation than this Act, a sum of money equal to 3 per cent. of the total salaries of the contributors to the funds on the last previous 31st March. (In this connection most of section 85 of the Government Railways Act, 1908, sections 48 and 49 of the Public Service Classification and Superannuation Act, 1908, and sections 38 and 39 of the Public Service Classification and Superannuation Amendment Act, 1908, should be repealed.)

The other three parts of the Bill should consolidate and simplify the existing legislation regarding Railways, teachers', and Public Service superannuation, which is at present inconveniently involved.

21. I would also suggest that the opportunity should be taken to include in the Bill any amending legislation which may be decided upon as being desirable in reference to the benefits and conditions of these funds, so that after the passing of this consolidating Bill none but purely machinery amendments will be likely to need attention in the future. It would be a relief to every one to get a long respite from matters concerning the superannuation of the Service, and an opportunity would then be available to give more attention to the superannuation needs of others who are outside the Service.

22. This finishes my report on the actuarial examination of the Railways Superannuation Fund, including some results of that examination in the form of recommendations for improving the conditions of the funds generally. It would not have been possible to have produced so full and comprehensive a report unless I had received most willing and able assistance, and my sincere thanks are due to Mr. P. Muter, F.I.A., Assistant Actuary, for the exercise of his great actuarial skill and experience, and in a scarcely less degree to Mr. C. E. Galwey, A.I.A., Chief Computer, for much freely given and useful help of a professional nature.

23. In conclusion, I very earnestly hope that what I have said will prove convincing as to the necessity for financially amalgamating these funds. The amount of subsidy represented by 3 per cent. of the salaries is heavy, yet not heavier than is necessary in order to achieve the desired object—viz., to leave to posterity only its fair share of the burden. I feel that any opposition to the scheme which may have existed hitherto has been principally due to an uncomfortable feeling that the past indefiniteness and irregularity of the subsidies asked for was because the matter was not properly understood. That was not the cause, which was entirely owing to the inevitable lack of the necessary data to work upon during the early years of a scheme of this kind. Now that I have shown how the subsidy may be placed on a simpler and more permanent basis, I believe that any slight opposition there may have been will vanish entirely.

Speaking generally, it is the rule rather than the exception throughout the British Empire for Governments, railway companies, police, and educational bodies, as well as private institutions such as banks, insurance offices, and large manufacturers, to establish pension or superannuation schemes for the benefit of themselves as well as their employees; these schemes being liberally subsidized by Government, municipal, or corporate funds, often to the extent of pound for pound of the employees' contributions, and sometimes even going beyond that limit. The burden on the contributor of providing the whole of his pension is recognized as too heavy.

Of this Dominion in particular it may be said that a sound and efficient form of superannuation should be regarded as a factor essential to the successful evolution of its Public Service system. That the employees benefit very largely by such a scheme is undeniable, but it may be shown conclusively that their employers, the public, also reap inestimable benefits which are not so clearly recognizable. One of the smallest of these benefits is that the Government is saved the direct payment of large sums of money in some other form ; the inauguration of the Public Service Fund, for instance, caused the cessation of yearly payments by way of compensation and gratuities amounting to more than the subsidies which have been granted to the Fund. But in addition to this there result two most important benefits to the State which it is not possible to estimate in money : (1) The existence of such a fund has a strong tendency to bind its younger employees to the service of the State, for it is reasonably certain they will not lightly leave their employment to seek advancement elsewhere when they consider what valuable future benefits they must forego by doing so ; (2) the Government is relieved from the payment of salaries to a number of its older employees who have outlived their efficiency, and a superannuation fund affords a convenient and legitimate means by which their removal from the Service can be effected without undeserved stigma or undue hardship. It is not too much to assume that, in the absence of such a fund, many praiseworthy old public servants would remain longer than they should do in the Service, drawing annual salaries from the Treasury and blocking promotion which it is desirable should be given. Indeed, quoting from a source which I cannot for the moment trace, "Superannuation funds soundly constituted and well administered, by securing the retirement of employees at an age when their capabilities are waning, supply an admirable aid by which the management of a country's concerns can be maintained with a maximum of efficiency."

Although still further lengthening a report which is perhaps already too long, I would also point out that there is a very important difference between this subsidy and an all-round increase of 3 per cent. in salaries. When a salary is increased in the usual way by 3 per cent. or any other amount the employee may either spend or save the increase as he chooses. What the Government will be doing in this matter is a different thing altogether. Practically it will be putting a small sum of money in its own strongbox on behalf of each of its employees and compelling him or her to place with it double the sum. The Government will then invest the combined deposits to the best advantage until the retirement of the employee from the Service through ill health or old age. The results achieved will be good all round from a purely business point of view, because the employee will remain more contented during the term of his service, on the conclusion of which it is certain that he will not become a burden on the State. I think that a vote of 3 per cent. of salary under such circumstances may be considered insignificant in comparison with the benefits that will ensue from the operation of the fund.

And, finally, so far as my own knowledge goes—which, though fairly extensive on this point, is by no means complete—New Zealand's superannuation system, an endeavour to perfect which is now being made, will already compare favourably with any other similar system in existence.

Respectfully submitted.

MORRIS FOX,

Actuary to the Government Insurance Department.

APPENDIX.

TABLE I.

THE BENEFITS AND CONTRIBUTIONS PROVIDED FOR BY THE ACT.

THE contributions vary according to the age at the time when the first contribution becomes payable, and are as follows:—

Contributions

For contributors who joined prior to the 1st January, 1908—

Age 30 and under			3 per cent. of pay.
Over 30 and not exceeding		35	4 ,,
,, 35	,,	40	5 ,,
,, 40	,,	45	6 ,,
,, 45	,,	50	7 ,,
,, age 50			10 ,,

For contributors who joined the scheme on or after the 1st January, 1908—

Age 30 and under			5 per cent. of pay.
Over 30 and not exceeding		35	6 ,,
,, 35	,,	40	7 ,,
,, 40	,,	45	8 ,,
,, 45	,,	50	9 ,,
,, age 50			10 ,,

Benefits

I. *On attaining of Pension at Age 60 or after Forty Years' Service.*

(1.) A pension of one-sixtieth of yearly salary for each year's service, with a limit of forty-sixtieths (two-thirds) of salary. Maximum pension for entrants after 24th December, 1909, £300.

(2.) Or the option, in lieu thereof, of a return of contributions, together with any compensation the contributor may be entitled to under section 76 of the Government Railways Act, 1887.

With the consent of the Minister a contributor may retire after thirty-five years' service.

II. *On retirement before Pension Age (on the Grounds of being Medically Unfit for Future Duty).*

(1.) A pension of one-sixtieth of yearly salary for every year of service, limited to forty-sixtieths. In the case of entrants after 24th December, 1909, maximum pension £300.

(2.) Or the option, in lieu thereof, of a return of contributions, together with any compensation the contributor may be entitled to under section 76 of the Government Railways Act, 1887.

III. *On Retirement before Pension Age (on other Grounds than Medical Unfitness).*

(1.) On voluntary retirement or dismissal for any other reason than misconduct, a return of contributions, together with any compensation the contributor may be entitled to under section 76 of the Government Railways Act, 1887.

(2.) On dismissal for misconduct, return of contributions.

IV. *At Death, before becoming entitled to a Retiring-allowance.*

(1.) Leaving no widow or children: A return of contributions, together with any compensation the contributor is entitled to under section 76 of the Government Railways Act, 1887.

(2.) Leaving a widow:—
  (*a.*) £18 per annum during widowhood, or if she so elects
  (*b.*) A return of such portion of the contributions and of the compensation to which the contributor was entitled as the Board, having regard to the rights of the children, thinks fit.

(3.) Leaving children: 5s. weekly to each child until age 14.

V. *At Death, after becoming entitled to a Pension.*

Return of the contributions and compensation (if any) less any sums received from the Fund.

Pensions are payable by monthly instalments, and are computed on the final salary, unless the contributor has during the previous five years served in any inferior grade to that held at the time of retirement, in which case the average salary for the last seven years is taken.

TABLE II.

STATEMENT OF PROGRESS OF ACTIVE MEMBERSHIP.

Year.	New Members.				Discontinued.									Members contributing at End of Financial Year.		
	Joining Scheme.		Transferred from other Funds.	Total.	By Death.		By Withdrawal or Dismissal.	By Pensions.				By Transfer to other Funds.	Total Discontinued.			
					Contributions Refunded.	Family Pension.		Old Age or Length of Service.			Medically Unfit.					
	M.	F.	M.		M.	M.	M.	M.	F.	Total.	M.	M.		M.	F.	Total.
Part 1903	3,425	1	..	3,426	3	3	7	8	..	8	5	..	26	3,399	1	3,400
1903–04	3,452	3	..	3,455	15	27	212	156	..	156	28	..	438	6,413	4	6,417
1904–05	708	..	..	708	12	22	205	99	1	100	15	..	354	6,768	3	6,771
1905–06	663	..	..	663	16	20	231	57	..	57	12	..	336	7,095	3	7,098
1906–07	841	..	..	841	17	20	343	58	..	58	12	..	450	7,486	3	7,489
1907–08	1,174	2	..	1,176	13	20	413	73	..	73	14	..	533	8,127	5	8,132
1908–09	1,325*	..	..	1,325	17	22	406	56	..	56	9	..	510	8,942	5	8,947
1909–10	554	..	2	556	16	26	394	123	..	123	6	..	565	8,933	5	8,938
1910–11	733	..	3	736	11	26	504	77	..	77	17	7	642	9,027	5	9,032
1911–12	857	..	4	861	13	19	539	52	..	52	14	8	645	9,243	5	9,248
Totals ..	13,732	6	9	13,747	133	205	3,254	759	1	760	132	15	4,499	..	..	..

* Includes 335 ex-employees of Wellington and Manawatu Railway Company.

TABLE III.

STATEMENT OF PROGRESS OF PENSIONS.

Year.	Attainment of Pension Age or Length of Service. (Section 80, &c.)						Retired Medically Unfit. (Section 81, &c.)					
	Granted.		Void by Death.		In Force.		Granted.		Void by Death or Expiry.		In Force.	
	Number.	Pension.	Number.	Pension.	Number.	Pension.	Number.	Pension.	Number.	Pension.	Number	Pension.
		£		£		£		£		£		£
1903–04 ..	161	9,950	1	66	160	9,884	33	1,700	5	256	28	1,444
1904–05 ..	100*	5,848	8	425	252*	15,307	15	1,046	4	483	39	2,007
1905–06 ..	56	3,788	10	672	298	18,422	12	632	3	135	48	2,503
1906–07 ..	59	3,911	17	1,020	340	21,314	12	712	9	466	51	2,750
1907–08 ..	74	5,626	12	683	402	26,257	14	852	8	416	57	3,185
1908–09 ..	53	4,816	18	1,233	437	29,840	8	485	8	444	57	3,226
1909–10 ..	123	10,066	9	502	551	39,404	7	420	2	130	62	3,517
1910–11 ..	80	6,305	27	1,598	604	44,111	17	1,325	8	421	71	4,421
1911–12 ..	54	5,229	24	1,666	634*	47,674	14	605	5	237	80	4,789
Totals ..	760	55,539	126	7,865	..	..	132	7,777	52	2,988	..	..

Year.	Death of Contributor. Family Pension. (Section 82, &c.)						Total Pensions.					
	Granted.		Void by Death or Expiry.		In Force.		Granted.		Void.		In Force.	
	Number.	Pension.	Number.	Pension.	Number.	Pension.	Number.	Pension.	Number.	Pension.	Number.	Pension.
		£		£		£		£		£		£
1903–04 ..	80	1,190	6	78	74	1,112	274	12,840	12	400	262	12,440
1904–05 ..	68	989	6	78	136	2,023	183*	7,883	18	986	427*	19,337
1905–06 ..	55	815	11	143	180	2,695	123	5,235	24	950	526	23,620
1906–07 ..	61	893	16	218	225	3,370	132	5,516	42	1,704	616	27,434
1907-08 ..	57	836	12	176	270	4,030	145	7,314	32	1,275	729	33,472
1908–09 ..	62	916	25	355	307	4,591	123	6,217	51	2,032	801	37,657
1909–10 ..	91	1,313	25	365	373	5,539	221	11,799	36	997	986	48,460
1910–11 ..	66	983	30	410	409	6,112	163	8,613	65	2,429	1,084	54,644
1911–12 ..	43	644	21	293	431	6,463	111	6,478	50	2,196	1,145*	58,926
Totals ..	583	8,579	152	2,116	..	..	1,475	71,895	330	12,969	..	..

* Includes one female pension, £51 12s. 11d.

TABLE IV.

Present Annual Pay and Contributions, with Prospective Pensions to Officers now in Service.

Age attained.	First Division.				Second Division.					Age attained.
	Number.	Present Annual Pay.	Present Annual Contributions.	Prospective Pensions at Retiring-age or for Length of Service.	Number.		Present Annual Pay.	Present Annual Contributions.	Prospective Pensions at Retiring-age or for Length of Service.	
	M.	£	£	£	M.	F.	£	£	£	
67	..	..	..	..	1	..	141	14·1	49	67
65	3	1,070	107·0	636	9	..	1,299	129·9	554	65
64	7	3,070	307·0	1,760	14	..	2,149	214·8	942	64
63	2	620	62·0	393	13	..	2,042	204·2	928	63
62	1	220	22·0	117	17	..	2,739	273·9	1,382	62
61	5	1,295	129·5	803	24	..	4,124	412·4	2,145	61
60	12	4,330	433·0	2,766	59	..	9,327	932·7	5,152	60
59	13	3,725	290·3	2,375	60	..	9,828	759·6	5,644	59
58	16	4,417	309·2	2,786	66	..	10,759	753·1	6,284	58
57	19	5,715	400·1	3,662	61	1	9,844	689·0	5,743	57
56	20	5,897	412·8	3,598	67	..	10,548	738·3	6,140	56
55	16	4,770	333·9	3,047	60	..	9,844	689·1	5,753	55
54	15	5,186	320·8	3,349	61	..	10,558	670·4	6,447	54
53	20	5,625	345·2	3,497	78	..	13,341	802·2	8,054	53
52	17	5,585	335·1	3,684	65	..	10,881	656·6	6,599	52
51	31	9,056	549·8	5,986	37	..	6,166	369·9	3,765	51
50	23	6,357	381·4	4,260	51	..	8,725	523·5	5,292	50
49	32	8,460	451·1	6,028	61	1	10,486	570·0	6,408	49
48	24	6,980	343·9	4,893	64	1	10,959	554·7	6,641	48
47	21	5,340	267·0	3,945	75	..	12,774	642·0	7,782	47
46	32	8,810	442·5	6,602	83	1	13,396	679·8	7,880	46
45	32	8,634	431·7	6,663	97	..	16,031	817·4	9,779	45
44	33	8,439	393·4	6,421	106	..	17,301	774·7	10,576	44
43	28	6,455	258·2	5,095	129	..	20,940	875·4	12,837	43
42	29	6,914	288·6	5,767	147	1	24,148	1,007·0	15,090	42
41	30	6,880	275·2	5,854	166	..	27,239	1,139·7	17,102	41
40	21	4,512	189·5	3,912	186	..	30,267	1,256·6	19,244	40
39	43	9,730	307·8	8,745	193	..	31,104	1,118·9	20,199	39
38	52	11,789	365·3	10,620	222	..	36,026	1,258·8	23,476	38
37	48	10,530	315·9	9,628	265	..	42,427	1,544·3	27,897	37
36	25	5,250	157·5	4,881	269	..	42,138	1,593·7	27,769	36
35	25	5,470	164·1	5,151	273	..	41,973	1,581·8	27,948	35
34	26	5,300	159·0	5,071	285	..	44,203	1,631·4	29,955	34
33	14	2,850	85·5	2,786	268	..	41,480	1,529·3	28,343	33
32	40	8,040	241·2	7,962	328	..	51,233	1,892·2	35,525	32
31	39	7,676	233·0	7,696	298	..	45,808	1,696·7	32,123	31
30	55	10,825	324·7	11,013	319	..	49,321	1,823·8	34,950	30
29	67	12,954	388·6	13,453	309	..	46,614	1,714·6	33,551	29
28	93	17,695	535·9	18,887	292	..	43,585	1,733·8	31,658	28
27	66	12,091	362·7	13,437	271	..	40,095	1,572·9	29,520	27
26	64	10,965	328·9	12,900	296	..	43,695	1,686·9	32,533	26
25	57	9,120	273·6	11,445	209	..	30,160	1,113·8	22,986	25
24	73	10,507	315·2	14,392	210	..	30,009	1,044·6	23,621	24
23	73	9,691	290·7	14,596	160	..	22,403	835·4	18,640	23
22	100	11,506	376·4	19,274	156	..	20,282	869·9	18,460	22
21	121	13,013	523·8	24,462	193	..	20,236	857·8	20,893	21
20	133	13,397	606·7	28,810	180	..	14,805	686·9	18,005	20
19	85	7,315	365·8	18,289	199	..	15,227	761·4	22,530	19
18	62	3,590	179·5	10,495	154	..	11,456	572·8	21,787	18
17	47	2,590	129·5	8,841	65	..	2,833	141·7	6,672	17
16	12	610	30·5	2,376	48	..	1,182	59·2	3,299	16
15	2	100	5·0	414	..	..	..	..	..	15
Totals	1,924	350,966	15,147·0	..	7,319	5	1,074,151	46,473·6	..	Totals

TABLE V.

Classification of Pensions granted, showing the Ages at which they were granted.

Age at which Pension granted.	Attainment of Pension-age or Length of Service (sec. 80, &c.).						Retired Medically Unfit (sec. 81, &c.).				Widows and Children (sec. 82, &c.).		Total.						Age at which Pension granted.
	Number.			Amount of Pension.			Number.	Amount of Pension.			Number.	Amount of Pension.	Number.			Amount of Pension.			
	M.	F.	Total.	£	s.	d.	M.	£	s.	d.		£	M.	F.	Total.	£	s.	d.	
77	3	..	3	249	15	5	1	35	4	3	..	..	4	..	4	284	19	8	77
76	1	..	1	19	16	6	..	..			..	..	1	..	1	19	16	6	76
75	4	..	4	215	9	11	1	43	2	2	..	..	5	..	5	258	12	1	75
74	5	..	5	413	9	2	..	..			..	..	5	..	5	413	9	2	74
73	6	..	6	366	19	6	..	..			..	..	6	..	6	366	19	6	73
72	1	..	1	5	4	4	..	..			..	..	1	..	1	5	4	4	72
71	11	1	12	1,277	10	8	..	..			..	..	11	1	12	1,277	10	8	71
70	13	..	13	998	9	3	..	..			1	18	13	1	14	1,016	9	3	70
69	17	..	17	1,140	0	4	2	86	17	1	..	..	19	..	19	1,226	17	5	69
68	22	..	22	1,481	7	5	1	51	2	6	..	..	23	..	23	1,532	9	11	68
67	44	..	44	3,106	8	10	..	..			1	18	44	1	45	3,124	8	10	67
66	42	..	42	3,469	3	9	2	74	6	3	..	..	44	..	44	3,543	10	0	66
65	67	..	67	4,539	9	2	1	52	19	0	..	..	68	..	68	4,592	8	2	65
64	54	..	54	3,804	14	4	3	155	3	10	1	18	57	1	58	3,977	18	2	64
63	48	..	48	3,525	10	5	2	94	6	10	..	..	50	..	50	3,619	17	3	63
62	76	..	76	5,006	11	9	1	63	18	1	2	36	77	2	79	5,106	9	10	62
61	110	..	110	8,312	19	1	4	295	1	8	1	18	114	1	115	8,626	0	9	61
60	232	..	232	17,123	17	5	1	56	12	0	3	54	233	3	236	17,234	9	5	60
59	2	..	2	245	3	8	7	480	12	6	2	36	9	2	11	761	16	2	59
58	..	..	..	..			11	710	14	5	5	90	11	5	16	800	14	5	58
57	..	..	..	..			14	1,065	12	0	3	54	14	3	17	1,119	12	0	57
56	..	..	..	..			7	509	4	11	1	18	7	1	8	527	4	11	56
55	1	..	1	236	13	4	13	1,000	6	10	3	54	14	3	17	1,291	0	2	55
54	..	..	..	..			8	514	17	0	10	180	8	10	18	694	17	0	54
53	..	..	..	..			3	249	0	9	2	36	3	2	5	285	0	9	53
52	..	..	..	..			3	165	11	10	4	72	3	4	7	237	11	10	52
51	..	..	..	..			7	364	0	11	..	..	7	..	7	364	0	11	51
50	..	..	..	..			3	165	16	7	6	108	3	6	9	273	16	7	50
49	..	..	..	..			2	73	0	8	5	90	2	5	7	163	0	8	49
48	..	..	..	..			6	370	10	11	5	90	6	5	11	460	10	11	48
47	..	..	..	..			2	76	18	2	9	162	2	9	11	238	18	2	47
46	..	..	..	..			1	59	17	3	1	18	1	1	2	77	17	3	46
45	..	..	..	..			1	42	5	1	5	90	1	5	6	132	5	1	45
44	..	..	..	..			..	..			8	144	..	8	8	144	0	0	44
43	..	..	..	..			2	39	13	10	7	126	2	7	9	165	13	10	43
42	..	..	..	..			..	..			6	108	..	6	6	108	0	0	42
41	..	..	..	..			2	127	18	10	5	90	2	5	7	217	18	10	41
40	..	..	..	..			2	47	9	6	5	90	2	5	7	137	9	6	40
39	..	..	..	..			1	55	4	9	2	36	1	2	3	91	4	9	39
38	..	..	..	..			2	139	19	5	5	90	2	5	7	229	19	5	38
37	..	..	..	..			1	77	0	0	7	126	1	7	8	203	0	0	37
36	..	..	..	..			4	189	17	10	6	108	4	6	10	297	17	10	36
35	..	..	..	..			..	..			8	144	..	8	8	144	0	0	35
34	..	..	..	..			..	..			9	162	..	9	9	162	0	0	34
33	..	..	..	..			1	48	0	0	8	144	1	8	9	192	0	0	33
32	..	..	..	..			..	..			3	54	..	3	3	54	0	0	32
31	..	..	..	..			..	..			3	54	..	3	3	54	0	0	31
30	..	..	..	..			1	33	8	10	2	36	1	2	3	69	8	10	30
29	..	..	..	..			3	69	19	8	11	198	3	11	14	267	19	8	29
28	..	..	..	..			..	..			2	36	..	2	2	36	0	0	28
27	..	..	..	..			1	4	3	6	12	216	1	12	13	220	3	6	27
26	..	..	..	..			1	27	10	0	7	126	1	7	8	153	10	0	26
25	..	..	..	..			3	57	1	11	2	36	3	2	5	93	1	11	25
24	..	..	..	..			..	..			7	126	..	7	7	126	0	0	24
23	..	..	..	..			..	..			3	54	..	3	3	54	0	0	23
22	..	..	..	..			..	..			1	18	..	1	1	18	0	0	22
21	..	..	..	..			..	..			1	18	..	1	1	18	0	0	21
19	..	..	..	..			1	2	12	0	..	..	1	..	1	2	12	0	19
14	..	..	..	..			..	..			13	169	204	179	13	169	0	0	14
13	..	..	..	..			..	..			32	416			32	416	0	0	13
12	..	..	..	..			..	..			23	299			23	299	0	0	12
11	..	..	..	..			..	..			29	377			29	377	0	0	11
10	..	..	..	..			..	..			30	390			30	390	0	0	10
9	..	..	..	..			..	..			28	364			28	364	0	0	9
8	..	..	..	..			..	..			24	312			24	312	0	0	8
7	..	..	..	..			..	..			20	260			20	260	0	0	7
6	..	..	..	..			..	..			26	338			26	338	0	0	6
5	..	..	..	..			..	..			26	338			26	338	0	0	5
4	..	..	..	..			..	..			29	377			29	377	0	0	4
3	..	..	..	..			..	..			26	338			26	338	0	0	3
2	..	..	..	..			..	..			30	390			30	390	0	0	2
1	..	..	..	..			..	..			22	286			22	286	0	0	1
0	..	..	..	..			..	..			25	325			25	325	0	0	0
Totals	759	1	760	55,538	14	3	132	7,777	3	7	583	8,579	1,095	380	1,475	71,894	17	10	Totals.

TABLE VI.

EXPERIENCE TABLE (RAILWAYS SUPERANNUATION).

Rates per Cent. per Annum of Withdrawal, Mortality, Retirement, and Increase of Salary.

Age.	First Division.		Second Division.		Combined Divisions.		Age.
	Rate of Withdrawal.	Rate of Increase of Salary,	Rate of Withdrawal.	Rate of Increase of Salary,	Rate of Mortality.	Rate of Retirement.	
15	6·40	5·76	..	..	0·20	..	15
16	6·45	14·01	9·61	18·69	0·23	..	16
17	6·43	16·72	10·11	24·68	0·25	..	17
18	6·30	16·96	10·25	27·64	0·27	..	18
19	6·00	16·25	10·25	21·66	0·28	..	19
20	5·50	14·41	9·41	17·80	0·28	..	20
21	4·80	12·22	8·01	13·43	0·28	..	21
22	4·00	11·22	6·91	9·38	0·29	..	22
23	3·30	9·94	6·11	5·72	0·33	..	23
24	2·70	9·18	5·56	3·27	0·37	..	24
25	2·30	6·65	5·51	2·20	0·40	..	25
26	2·20	5·88	5·61	1·08	0·40	..	26
27	2·20	4·11	5·71	0·67	0·37	..	27
28	2·30	2·78	5·69	0·93	0·34	..	28
29	2·34	2·08	5·51	0·52	0·30	..	29
30	2·34	1·43	5·16	0·52	0·28	..	30
31	2·25	1·30	4·81	0·39	0·26	..	31
32	2·10	1·29	4·46	0·26	0·27	..	32
33	1·90	1·66	4·16	0·39	0·28	..	33
34	1·65	1·73	3·86	0·64	0·30	..	34
35	1·50	1·70	3·56	0·64	0·33	0·10	35
36	1·35	1·21	3·31	0·89	0·38	0·10	36
37	1·20	1·01	3·06	1·01	0·42	0·10	37
38	1·05	1·00	2·86	0·87	0·45	0·10	38
39	0·95	1·44	2·65	0·37	0·47	0·10	39
40	0·85	1·86	2·45	0·37	0·50	0·10	40
41	0·85	2·79	2·26	..	0·50	0·10	41
42	0·85	3·90	2·06	..	0·50	0·10	42
43	0·85	2·94	1·91	0·24	0·50	0·10	43
44	0·83	2·70	1·79	0·61	0·50	0·10	44
45	0·74	2·08	1·66	0·49	0·51	0·13	45
46	0·64	1·96	1·56	0·36	0·53	0·20	46
47	0·50	1·70	1·46	..	0·55	0·30	47
48	0·35	1·82	1·36	..	0·60	0·35	48
49	0·30	2·72	1·30	..	0·65	0·39	49
50	0·30	2·44	1·21	..	0·71	0·40	50
51	0·30	1·22	1·15	..	0·80	0·40	51
52	0·30	0·61	1·10	..	0·90	0·40	52
53	0·30	0·20	1·06	..	1·00	0·40	53
54	0·30	..	1·05	..	1·10	0·44	54
55	0·30	..	1·01	..	1·17	0·80	55
56	0·30	..	0·99	..	1·23	1·40	56
57	0·30	..	0·95	..	1·28	2·40	57
58	0·30	..	0·81	..	1·30	6·00	58
59	0·23	..	0·61	..	1·30	9·92	59
60	..	..	..	..	1·35	13·60	60
61	..	..	..	..	1·46	17·40	61
62	..	..	..	..	1·73	21.00	62
63	..	..	..	..	1·90	24·80	63
64	..	..	..	..	2·00	29·32	64

TABLE VII.

LIFE AND SERVICE TABLE (RAILWAYS SUPERANNUATION).

BASED UPON THE RATES PER CENT. PER ANNUM OF WITHDRAWAL, MORTALITY, AND RETIREMENT GIVEN IN TABLE VI FOR CONTRIBUTING MEMBERS.

	First Division.					Second Division.					
Age.	Existing in Service.	Withdrawals.	Deaths.	Retirements.	Average Salary.	Existing in Service.	Withdrawals.	Deaths.	Retirements.	Average Salary.	Age.
15	100,000	6,400	199	..	48·6	..	..	..	..	..	..
16	93,401	6,025	215	..	51·4	91,191	8,763	211	..	39·6	16
17	87,161	5,605	219	..	58·6	82,217	8,312	206	..	47·0	17
18	81,337	5,124	219	..	68·4	73,699	7,554	199	..	58·6	18
19	75,994	4,560	213	..	80·0	65,946	6,759	185	..	74·8	19
20	71,221	3,917	200	..	93·0	59,002	5,551	165	..	91·0	20
21	67,104	3,220	188	..	106·4	53,286	4,268	149	..	107·2	21
22	63,696	2,547	185	..	119·4	48,869	3,377	142	..	121·6	22
23	60,964	2,012	202	..	132·8	45,350	2,771	149	..	133·0	23
24	58,750	1,586	217	..	146·0	42,430	2,359	157	..	140·6	24
25	56,947	1,310	228	..	159·4	39,914	2,200	160	..	145·2	25
26	55,409	1,219	222	..	170·0	37,554	2,107	150	..	148·4	26
27	53,968	1,187	200	..	180·0	35,297	2,015	131	..	150·0	27
28	52,581	1,209	179	..	187·4	33,151	1,886	113	..	151·0	28
29	51,193	1,198	154	..	192·6	31,152	1,716	94	..	152·4	29
30	49,841	1,166	139	..	196·6	29,342	1,514	82	..	153·2	30
31	48,536	1,092	127	..	199·4	27,746	1,335	72	..	154·0	31
32	47,317	993	128	..	202·0	26,339	1,175	71	..	154·6	32
33	46,196	878	129	..	204·6	25,093	1,044	70	..	155·0	33
34	45,189	746	135	..	208·0	23,979	925	72	..	155·6	34
35	44,308	665	146	44	211·6	22,982	818	76	23	156·6	35
36	43,453	587	165	43	215·2	22,065	730	84	22	157·6	36
37	42,658	512	179	42	217·8	21,229	650	89	21	159·0	37
38	41,925	440	189	42	220·0	20,469	585	92	21	160·6	38
39	41,254	392	194	41	222·2	19,771	523	93	20	162·0	39
40	40,627	345	203	40	225·4	19,135	469	96	19	162·6	40
41	40,039	341	200	40	229·6	18,551	418	93	19	163·2	41
42	39,458	335	197	39	236·0	18,021	372	90	18	163·2	42
43	38,887	331	194	39	245·2	17,541	335	88	17	163·2	43
44	38,323	318	192	38	252·4	17,101	306	86	17	163·6	44
45	37,775	279	193	49	259·2	16,692	277	85	22	164·6	45
46	37,254	238	198	75	264·6	16,308	254	86	33	165·4	46
47	36,743	183	202	110	269·8	15,935	233	88	48	166·0	47
48	36,248	127	217	127	274·4	15,566	212	93	54	166·0	48
49	35,777	107	233	140	279·4	15,207	198	99	59	166·0	49
50	35,297	106	251	141	287·0	14,851	180	105	59	166·0	50
51	34,799	104	278	139	294·0	14,507	167	116	58	166·0	51
52	34,278	103	308	137	297·6	14,166	156	127	57	166·0	52
53	33,730	101	337	136	299·4	13,826	147	138	55	166·0	53
54	33,156	100	365	146	300·0	13,486	142	148	60	166·0	54
55	32,545	98	380	260	300·0	13,136	133	153	105	166·0	55
56	31,807	95	391	446	300·0	12,745	126	157	179	166·0	56
57	30,875	93	395	741	300·0	12,283	116	157	295	166·0	57
58	29,646	89	385	1,779	300·0	11,715	95	152	703	166·0	58
59	27,393	63	356	2,717	300·0	10,765	66	140	1,068	166·0	59
60	24,257	..	328	3,299	300·0	9,491	..	128	1,291	166·0	60
61	20,630	..	301	3,590	300·0	8,072	..	118	1,404	166·0	61
62	16,739	..	289	3,515	300·0	6,550	..	113	1,376	166·0	62
63	12,935	..	246	3,208	300·0	5,061	..	96	1,255	166·0	63
64	9,481	..	189	2,780	300·0	3,710	..	74	1,088	166·0	64
65	6,512	..	..	6,512	300·0	2,548	..	..	2,548	166·0	65

TABLE VIII.

CONTRIBUTIONS PER CENT. OF SALARY.

Those now payable under the Scheme, together with those necessary to produce the various Benefits of the Fund for Future Service.

	First Division.					Second Division.				
Age at Date of joining Fund.	Contributions per Cent. payable by Members now joining Scheme.	For Pension for Old Age, Length of Service, or Ill Health.	For Pension to Widows during Widowhood and to Children under Age 14.	For Return of Contributions on Withdrawal, or on Death if unmarried.	Total Contribution necessary.	For Pension for Old Age, Length of Service, or Ill Health.	For Pension to Widows during Widowhood and to Children under Age 14.	For Return of Contributions on Withdrawal, or on Death if unmarried.	Total Contribution necessary.	Age at Date of joining Fund.
15	5	4·499	0·356	0·857	5·712	..	..	..	..	..
16	5	4·610	0·366	0·820	5·796	2·113	0·360	1·869	4·342	16
17	5	4·724	0·376	0·787	5·887	2·199	0·376	1·825	4·400	17
18	5	4·847	0·387	0·755	5·989	2·296	0·394	1·782	4·472	18
19	5	4·978	0·399	0·723	6·100	2·411	0·416	1·736	4·563	19
20	5	5·115	0·413	0·691	6·219	2·545	0·442	1·683	4·670	20
21	5	5·255	0·428	0·660	6·343	2·696	0·473	1·627	4·796	21
22	5	5·395	0·445	0·630	6·470	2·862	0·508	1·567	4·937	22
23	5	5·536	0·463	0·601	6·600	3·044	0·547	1·503	5·094	23
24	5	5·678	0·482	0·572	6·732	3·239	0·590	1·433	5·262	24
25	5	5·825	0·501	0·543	6·869	3·442	0·634	1·360	5·436	25
26	5	5·950	0·521	0·514	6·985	3·637	0·678	1·286	5·601	26
27	5	6·087	0·541	0·483	7·111	3·840	0·722	1·210	5·772	27
28	5	6·234	0·560	0·453	7·247	4·047	0·764	1·137	5·948	28
29	5	6·387	0·580	0·423	7·390	4·258	0·807	1·067	6·132	29
30	6	6·541	0·601	0·473	7·615	4·470	0·851	1·200	6·521	30
31	6	6·696	0·622	0·440	7·758	4·684	0·896	1·125	6·705	31
32	6	6·848	0·644	0·410	7·902	4·898	0·943	1·054	6·895	32
33	6	6·997	0·665	0·383	8·045	5·114	0·989	0·988	7·091	33
34	6	7·144	0·685	0·359	8·188	5·330	1·035	0·926	7·291	34
35	7	7·290	0·704	0·392	8·386	5·547	1·078	1·012	7·637	35
36	7	7·435	0·721	0·368	8·524	5·767	1·118	0·949	7·834	36
37	7	7·580	0·733	0·345	8·658	5·990	1·151	0·889	8·030	37
38	7	7·722	0·743	0·324	8·789	6·218	1·180	0·833	8·231	38
39	7	7·859	0·750	0·305	8·914	6·452	1·206	0·779	8·437	39
40	8	7·994	0·755	0·327	9·076	6·690	1·231	0·832	8·753	40
41	8	8·127	0·759	0·307	9·193	6·932	1·253	0·777	8·962	41
42	8	8·262	0·765	0·288	9·315	7·176	1·278	0·724	9·178	42
43	8	8·405	0·773	0·269	9·447	7·423	1·306	0·674	9·403	43
44	8	8·558	0·785	0·252	9·595	7·672	1·339	0·627	9·638	44
45	9	8·719	0·800	0·265	9·784	7·927	1·378	0·654	9·959	45
46	9	8·888	0·818	0·249	9·955	8·189	1·422	0·604	10·215	46
47	9	9·062	0·838	0·234	10·134	8·458	1·470	0·556	10·484	47
48	9	9·243	0·861	0·221	10·325	8·735	1·524	0·508	10·767	48
49	9	9·432	0·886	0·208	10·526	9·017	1·580	0·462	11·059	49
50	10	9·637	0·913	0·216	10·766	9·305	1·638	0·464	11·407	50
51	10	9·867	0·942	0·201	11·010	9·601	1·698	0·414	11·713	51
52	10	10·118	0·971	0·185	11·274	9·902	1·754	0·366	12·022	52
53	10	10·383	0·997	0·169	11·549	10·208	1·804	0·318	12·330	53
54	10	10·656	1·019	0·151	11·826	10·516	1·845	0·270	12·631	54
55	10	10·931	1·036	0·134	12·101	10·824	1·876	0·224	12·924	55
56	10	11·201	1·051	0·117	12·369	11·127	1·902	0·179	13·208	56
57	10	11·464	1·065	0·100	12·629	11·417	1·927	0·138	13·482	57
58	10	11·711	1·084	0·084	12·879	11·687	1·960	0·103	13·750	58
59	10	11·939	1·113	0·071	13·123	11·932	2·012	0·077	14·021	59
60	10	12·154	1·162	0·062	13·378	12·153	2·100	0·062	14·315	60
61	10	12·368	1·238	0·056	13·662	12·368	2·237	0·056	14·661	61
62	10	12·603	1·336	0·047	13·986	12·602	2·414	0·047	15·063	62
63	10	12·875	1·401	0·035	14·311	12·874	2·532	0·035	15·441	63
64	10	13·195	1·433	0·020	14·648	13·193	2·590	0·022	15·805	64

TABLE IX.

PENSIONS IN FORCE (EXCLUDING PENSIONS TO WIDOWS AND CHILDREN).

(1) Purchased by contribution. (2) Payable out of subsidy.

Age at Retirement.	Number retired on Pension.	Total Contributions paid.			Annual Pensions.			(1) Pensions purchased by Contribution.			(2) Pensions payable out of Subsidy.			Age at Retirement.
		£	s.	d.	£	s.	d.	£	s.	d.	£	s.	d.	
77	1	114	18	8	133	6	8	21	10	10	111	15	10	77
75	1	74	11	1	58	10	0	12	13	11	45	16	1	75
74	2	131	4	9	164	14	7	21	7	2	143	7	5	74
73	5	265	19	10	327	17	0	41	10	2	286	6	10	73
71	9	1,053	4	5	1,100	15	4	152	14	0	948	1	4	71
70	11	529	11	11	818	15	4	74	7	8	744	7	8	70
69	13	807	10	10	882	12	6	110	6	5	772	6	1	69
68	13	714	2	0	969	2	6	95	5	3	873	17	3	68
67	32	2,050	14	5	2,424	11	6	268	5	5	2,156	6	1	67
66	39	2,491	19	9	3,109	12	10	320	15	2	2,788	17	8	66
65	57	4,321	18	10	3,931	19	11	549	1	10	3,382	18	1	65
64	43	2,622	3	0	3,224	8	9	329	15	0	2,894	13	9	64
63	43	2,315	14	5	3,168	5	0	288	17	7	2,879	7	5	63
62	66	4,000	16	0	4,404	6	4	496	3	10	3,908	2	6	62
61	95	7,169	8	3	7,298	13	4	885	10	10	6,413	2	6	61
60	208	17,274	10	1	15,538	16	8	2,128	16	0	13,410	0	8	60
59	5	328	8	11	415	6	3	40	8	8	374	17	7	59
58	10	626	3	10	637	1	1	77	2	4	559	18	9	58
57	8	421	4	6	510	12	11	51	19	1	458	13	10	57
56	4	271	5	11	270	2	4	33	10	10	236	11	6	56
55	10	720	11	11	1,012	0	10	89	7	8	922	13	2	55
54	8	408	7	2	514	17	0	50	17	2	463	19	10	54
53	2	62	6	10	188	0	1	7	16	1	180	4	0	53
52	2	43	2	2	113	9	3	5	8	6	108	0	9	52
51	4	155	16	11	216	3	1	19	14	6	196	8	7	51
50	2	9	11	7	139	19	0	1	4	5	138	14	7	50
49	1	17	7	8	36	10	4	2	4	6	34	5	10	49
48	5	263	19	11	304	10	11	33	19	8	270	11	3	48
47	1	78	8	4	55	0	0	10	2	9	44	17	3	47
45	1	55	2	5	42	5	1	7	3	6	35	1	7	45
43	1	41	16	6	19	14	9	5	9	6	14	5	3	43
40	2	74	8	0	47	9	6	9	16	0	37	13	6	40
38	2	98	17	3	139	19	5	13	1	2	126	18	3	38
36	2	70	7	8	126	13	4	9	6	4	117	7	0	36
33	1	12	8	8	48	0	0	1	13	0	46	7	0	33
29	1	10	2	7	30	0	0	1	6	11	28	13	1	29
27	1	8	14	6	4	3	6	1	3	3	3	0	3	27
25	2	39	8	5	32	6	11	5	4	11	27	2	0	25
19	1	5	9	8	2	12	0	0	14	7	1	17	5	19
Totals..	714	49,761	19	7	52,463	5	10	6,275	16	5	46,187	9	5	Totals.

TABLE X.

Consolidated Revenue Account of the Government Railways Superannuation Fund from the 1st January, 1903, to the 31st March, 1912.

Income.

	£	s.	d.
Funds at the 1st January, 1903	..		
Amount transferred from the Railway Servants' Fund	3,606	7	9
Members' contributions	449,343	3	2
Arrears of contributions paid by late employées of the Wellington and Manawatu Railway Company in terms of section 96 (2) of the Government Railways Act, 1908	7,232	10	8
Contribution by the company in terms of the same section of the Act	5,000	0	0
Payment made by the Amalgamated Society of Railway Servants in terms of section 55 (1) of the Public Service Classification and Superannuation Amendment Act, 1908	1,500	0	0
Government contributions	50,000	0	0
Transfers from other funds	17	12	0
Interest	49,661	8	5
Fines	3,206	5	10
Miscellaneous	7	17	8
	£569,575	5	6

Outgo.

	£	s.	d.
Pensions to members	256,652	16	8
Pensions to widows and children	32,793	13	0
Contributions returned, together with compensation paid at death or withdrawal	41,713	18	1
Transfers to other funds	422	10	4
Public Trust Office Commission	3,890	17	11
Travelling and legal expenses	610	2	8
Fines remitted and refunded	33	18	4
Funds at the 31st March, 1912	233,457	8	6
	£569,575	5	6

TABLE XI.

Valuation Balance-sheet of the Government Railways Superannuation Fund as at 31st March, 1912.

Liabilities.

	£
Value of 714 pensions for £52,463 5s. 10d. per annum already granted	390,828
,, 172 pensions for £3,096 per annum granted to widows of contributors	36,326
,, 259 pensions for £3,367 per annum granted to the children of deceased contributors	14,867
,, prospective pensions for back service	1,034,257
,, ,, for future service	941,180
,, ,, to widows	111,509
,, ,, to children	44,839
,, return of contributions on death	13,335
,, ,, on withdrawal	156,053
	£2,743,194

Assets.

	£
Accumulated funds	233,457
Value of future contributions	732,886
,, subsidy of £25,000 per annum	625,000
,, increase in subsidy of £25,000 per annum now necessary	625,000
,, future increases in subsidy to be provided	526,851
	£2,743,194

Approximate Cost of Paper.—Preparation, not given; printing 2,250 copies), £17 10s..

By Authority: John Mackay, Government Printer, Wellington.—1913.

Price 6d.]

1913.
NEW ZEALAND.

MINISTERIAL RESIDENCES AND HOUSE ALLOWANCES

(RETURNS RELATIVE TO).

Return to an Order of the House of Representatives dated the 24th October, 1912.

Ordered, "That there be laid before this House a return showing—(1) How much has been spent during the last ten years in the upkeep of Ministerial residences; (2) how much has been spent in each of the last ten years in furnishing these residences; (3) the value of the furniture in these residences at the present time; and (4) the amount of house allowance for the same period that each Minister has given up."—(Mr. CAMPBELL.)

(1.) AMOUNT SPENT DURING THE TEN YEARS ENDED 24TH OCTOBER, 1912, ON THE UPKEEP OF MINISTERIAL RESIDENCES.

UPKEEP, £13,726, including rent of land leased for purposes of the residences, wages of gardeners, gas, electric light, and water-supply, but not including cost of additions made to the buildings, nor purchase of land.

In addition to the above, staff workmen—whose wages have not been charged directly to the residences—have from time to time been sent from the Public Works workshops to carry out small repairs, &c.

(2.) AMOUNT SPENT IN EACH YEAR DURING THE TEN YEARS ENDED 24TH OCTOBER, 1912, IN FURNISHING THESE RESIDENCES.

	£
25th October, 1902, to 31st March, 1903	58
1903–4	871
1904–5	407
1905–6	491
1906–7	491
1907–8	1,599
1908–9	244
1909–10	84
1910–11	841
1911–12	239
1st April, 1912, to 24th October, 1912	12
Total	£5,337

(3.) VALUE OF FURNITURE IN MINISTERIAL RESIDENCES ON 24th OCTOBER, 1912.

£4,980.

(4.) AMOUNT OF HOUSE ALLOWANCE FOR THE SAME PERIOD THAT EACH MINISTER HAS GIVEN UP.

	£	s.	d.
Hon. R. J. Seddon	1,526	6	10
Hon. Sir J. G. Ward	1,885	4	8
Hon. W. Hall-Jones	433	17	5
Hon. C. H. Mills	765	11	10
Hon. J. A. Millar	649	9	4
Hon. T. Mackenzie	360	7	3
Hon. G. Laurenson	47	1	2
Hon. W. Fraser	26	15	10
Total	£5,694	14	4

CHAS. E. BENNETT, Accountant.

Public Works Department, Wellington, 10th July, 1913.

Approximate Cost of Paper.—Preparation, not given; printing (1,500 copies), £1 7s. 6d.

By Authority: JOHN MACKAY, Government Printer, Wellington.—1913.

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SITY OF ILLINOIS
1913

1913.
NEW ZEALAND.

CO-OPERATIVE WORKERS

(RETURNS RELATIVE TO) FROM 31st MARCH, 1911, TO 1st SEPTEMBER, 1912.

Return to an Order of the House of Representatives dated the 3rd October, 1912.

Ordered, "That there be laid before this House a return showing—(1) The number of co-operative workers employed by the Government for each month from the 31st March, 1911, to the 1st September, 1912; (2) the average amount of money earned per man per hour when working for the above-mentioned period; and (3) the average amount earned per man per week for the time named."—(Mr. WITTY.)

(1.) NUMBER OF CO-OPERATIVE WORKERS EMPLOYED BY THE GOVERNMENT FOR EACH MONTH FROM THE 31ST MARCH, 1911, TO THE 1ST SEPTEMBER, 1912.

1911.		1912.	
April	3,459	January	2,959
May	3,460	February	3,128
June	3,145	March	3,146
July	3,219	April	3,296
August	3,291	May	3,199
September	3,311	June	3,087
October	3,033	July	2,815
November	2,976	August	2,778
December	3,106		

(2.) AVERAGE AMOUNT OF MONEY EARNED PER MAN PER HOUR WHEN WORKING FOR THE ABOVE-MENTIONED PERIOD.

1s. 1·2d. per hour.

(3.) AVERAGE AMOUNT EARNED PER MAN PER WEEK FOR THE TIME NAMED.

£2 6s. 11d. per week.

CHAS. E. BENNETT, Accountant.
H. J. H. BLOW, Under-Secretary.

Public Works Department, Wellington, 31st July, 1913.

Approximate Cost of Paper.—Preparation, not given: printing (1,500 copies), £1 5s.

By Authority: JOHN MACKAY, Government Printer, Wellington.—1913.

Price 3d.

1913.
NEW ZEALAND.

APPLICATIONS FOR POSITION OF GENERAL MANAGER OF RAILWAYS

(NUMBER OF) AND WHERE DOMICILED.

Return to an Order of the House of Representatives dated the 25th July, 1913.

Ordered, "That there be laid before this House a return showing—(1) The total number of applicants for the position of General Manager of the New Zealand Railways; (2) the number of applicants for the above position, separately, who at the time of application were domiciled in England, Canada, India, Australia, or the United States; and (3) the number of applicants for the position from those at present employed by the New Zealand Railways Department."—(Mr. Witty.)

Return showing—(1) The Total Number of Applicants for the Position of General Manager of the New Zealand Railways; (2) the Number of Applicants for the above Position, separately, who at the Time of Application were domiciled in England, Canada, India, Australia, or the United States; and (3) the Number of Applicants for the Position from those at present employed by the New Zealand Railways Department.

1. The total number of applicants for the position of General Manager of the New Zealand Railways was 104.

2. The number of applicants for the position of General Manager of the New Zealand Railways who at the time of application were domiciled outside of New Zealand was:—

United Kingdom	58
Canada	3
India	4
Australia	1
United States	9
Egypt	2
South Africa	2

3. The number of applications for the position of General Manager of the New Zealand Railways from those at present employed by the New Zealand Railways Department was 25.

T. Ronayne,
General Manager.

Approximate Cost of Paper.—Preparation, not given; printing (14,00 copies), £1.

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1913.
NEW ZEALAND.

PARLIAMENT BUILDINGS, OLD AND NEW:

RETURNS RELATIVE TO EXPENDITURE, ETC.

Return to an Order of the House of Representatives dated the 12th September, 1912.

Ordered, "That there be laid before this House a return showing in detail—

(1.) (*a*) The amount paid on Frain's contract at the old Parliament Buildings; (*b*) the value of plant and material taken over by the Government as an asset against such payment; (*c*) the actual cost of cancelling Frain's contract, after deducting the value of such plant and material from the total payment.

(2.) (*a*) The cost of removing debris from old Parliament Buildings after the fire; (*b*) the cost of removing, repairing, storing, and returning furniture saved from the fire; (*c*) the cost of renovating the old Parliament Buildings, including the cost of providing the Committee-rooms at present in use in those buildings; (*d*) the cost of erecting an additional story for departmental offices in the portion of old Parliament Buildings destroyed by fire; (*e*) the total cost of refurnishing the old Parliament Buildings, including the departmental offices located there; (*f*) the total amount spent on the old Parliament Buildings since the fire, exclusive of ordinary maintenance charges since the fire; (*g*) the amount spent on the old Parliament Buildings, after deducting the amounts referred to under headings (*a*), (*b*), (*e*), and (*f*); (*h*) the probable annual rental that would have to be paid in Wellington for the accommodation at present used in the old Parliament Buildings as Committee-rooms and departmental offices.

(3.) (*a*) The total cost of alterations and additions to the present Parliament Buildings, the cost of the new Legislative Council Chamber and the tube to be shown separately; (*b*) the cost of furnishings and fittings in the present Parliament Buildings; (*c*) the total amount spent on present Parliament Buildings exclusive of furniture, fittings, and ordinary maintenance charges (including painting and repairing); (*d*) the estimated annual rental that would have to be paid for suitable temporary accommodation for Parliament, and the total amount that would have had to be paid since the fire in December, 1907.

(4.) (*a*) The estimated cost of acquiring Quinton's corner, widening Bowen Street and Charlotte Street, and the construction of new Museum Street, including the raising of a portion of Sydney Street, and also the footpath from Sydney Street to Hill Street.

(5.) (*a*) The estimated cost of the first portion of the new Parliament Buildings to be erected, sent in by the Government Architect along with the prize competitive design for the Parliament Buildings, including foundations and alterations to the grounds; (*b*) the total quantity of concrete and excavation in the foundation for the first section of the building to be erected, also the estimated quantity (i) of concrete, (ii) of excavation when finished, and (iii) the cost of reinforcing-steel used in this portion of the foundations; (*c*) the cost of alterations to the grounds, including roading within the grounds; (*d*) any estimate submitted by the Government Architect subsequent to the estimate sent in with his competitive design and showing the total cost of the section of the Parliament Buildings proposed to be erected at present, including cost of foundations and alterations to grounds and cost of widening and forming streets; (*e*) the value of land acquired by the Government in Sydney Street and old Museum Street.

(6.) (*a*) The total expenditure on new Government House; (*b*) the cost and valuation of land acquired by the Government for Government House site; (*c*) the cost of furnishing Government House and other buildings connected therewith; (*d*) the cost of other buildings connected with Government House; (*e*) the cost of Government House, exclusive of the items (*a*), (*b*), and (*c*) under heading (6).

Also, that there be laid before this House the report of the Parliamentary Committee that took evidence on the subject of erecting new Parliament Buildings in 1908, printed on page ii of Paper I.–14 of the session of 1908."—(Hon. Mr. R. McKenzie.)

RETURN.

1. (*a*.)	The amount paid on Frain's contract at the old Parliament Buildings ..	£8,828
(*b*.)	The value of plant and material taken over by the Government as an asset against such payment	£2,036
(*c*.)	The actual cost of cancelling Frain's contract, after deducting the value of such plant and material from the total payment	£6,792
2. (*a*.)	The cost of removing debris from old Parliament Buildings after the fire ..	£453
(*b*.)	The cost of removing, repairing, storing, and returning furniture saved from the fire	£84
(*c*.)	The cost of renovating the old Parliament Buildings, including the cost of providing the Committee-rooms at present in use in those buildings	£10,030
(*d*.)	The cost of erecting an additional story for Departmental offices in the portion of the old Parliament Buildings destroyed by fire ..	
(*e*.)	The total cost of refurnishing the old Parliament Buildings, including the departmental offices located there	£811

Return—*continued.*

(*f.*) The total amount spent on the old Parliament Buildings since the fire, exclusive of ordinary maintenance charges since the fire	£10,841
(*g.*) The amount spent on the old Parliament Buildings after deducting the amounts referred to under headings (*a*), (*b*), (*e*), and (*f*)	..
(*h.*) The probable annual rental that would have to be paid in Wellington for the accommodation at present used in the old Parliament Buildings as Committee-rooms and departmental offices	£2,000
3. (*a.*) The total cost of alterations and additions to the present Parliament Buildings; the cost of the new Legislative Council Chamber and the tube to be shown separately—	
Legislative Council Chamber	£3,423
The tube	£560
Main building and furniture	£10,447
(*b.*) The cost of furnishings and fittings in the present Parliament Buildings (included in 3 (*a*))	£4,981
(*c.*) The total amount spent on present Parliament Buildings exclusive of furniture, fittings, and the ordinary maintenance charges (including painting and repairing) (not including the tube)	£8,889
(*d.*) The estimated annual rental that would have to be paid for suitable temporary accommodation for Parliament, and the total amount that would have had to be paid since the fire in December, 1907—	
Suitable accommodation was unobtainable, but if obtainable, the annual rental would probably have been from	£5,000 to £7,000
The total amount that would have been paid since the fire (probably)	£35,000
4. (*a.*) The estimated cost of acquiring Quinton's corner, widening Bowen and Charlotte Streets, and the construction of new Museum Street, including the raising of a portion of Sydney Street, and also the footpath from Sydney Street to Hill Street	£15,500
5. (*a.*) The estimated cost of the first portion of the new Parliament Buildings to be erected, sent in by the Government Architect along with the prize competitive design for the Parliament Buildings, including foundations and alterations to the grounds. (The Government Architect's estimate included normal foundations only (to a depth of 3 ft.) and did not include alterations to grounds)	£109,807
(*b.*) The total quantity of concrete and excavation in the foundation for the first portion of the building to be erected, also the estimated quantity—	
(i.) Of concrete	5,707 cub. yd.
(ii.) Of excavation when finished	14,392 cub. yd.
(iii.) The cost of reinforcing-steel used in this portion of the foundation	£97
(*c.*) The estimated cost of alterations to the grounds, including roading within the grounds	£16,500
(*d.*) Any estimate submitted by the Government Architect subsequent to the estimate sent in with his competitive design and showing the total cost of the section of the Parliament Buildings proposed to be erected at present, including cost of foundations and alterations to grounds, and the cost of widening and forming streets. (The Government Architect's estimate does not include the foundation, nor alteration to grounds or streets)	£110,500 to £130,500, according to the stone used.
(*e.*) The value of land required by the Government in Sydney Street and old Museum Street	£8,500
6. (*a.*) The total expenditure on new Government House	£57,846
(*b.*) The cost and valuation of land acquired by the Government for the Government House site (including cost of road through College ground constructed in lieu of paying compensation for land taken)—	
Cost	£10,393
Valuation	£9,250
(*c.*) The cost of furnishing Government House and other buildings connected therewith	£6,222
(*d.*) The cost of other buildings connected with Government House	£2,444
(*e.*) The cost of Government House, exclusive of the items (*a*), (*b*), and (*c*) under heading 6	..

Chas. E. Bennett, Accountant.

Public Works Office, 9th July, 1913.

REPORT.

(*Vide* I.-14, Session 1908.)

1. The Committee appointed to inquire and report as to the most suitable site for the erection of new Parliamentary Buildings have the honour to report that they have duly inquired into the matter, and have examined the following witnesses: viz., Messrs. John Campbell, Government Architect; Jackson Palmer, Chief Judge Native Land Court; H. J. H. Blow, Under-Secretary for Public Works; J. M. Bathan, Registrar-General of Lands and Deeds; G. F. C. Campbell, Valuer-General; A. Hamilton, Director of Museum; P. Heyes, Commissioner of Taxes and Superintendent Government Advances to Settlers Department; and Charles Wilson, Parliamentary Librarian.

2. The evidence of these witnesses is attached to this report, and, in the opinion of your Committee, clearly shows that the site presently occupied by Government House and now temporarily used by the Legislature has great advantages over the site bounded by Hill Street, Molesworth Street, and Sydney Street, on which were erected the recently destroyed Parliamentary Buildings (afterwards referred to in this report as "the Molesworth Street site"), and that no other available site in the City of Wellington is equally suitable.

3. The evidence also shows that further accommodation for the various Departments of the public service, and also for the Parliamentary Library and the Museum, is urgently required, the building in Lambton Quay being already fully occupied, and affording barely sufficient accommodation for the officers (numbering 670) employed therein, although to relieve the pressure a number of suites of offices scattered over various parts of the city are rented by the Government at a cost of £3,117 per annum.

4. Your Committee find that to extend the building on Lambton Quay would be to increase the already serious risk of destruction by fire, to which not only the building itself but also the valuable and irreplaceable public records stored therein are now exposed.

5. Your Committee regard it as imperatively necessary to make provision for suitable fire-proof buildings, and they find that this can best be effected by erecting such buildings on the Molesworth Street site.

6. They recommend that this be done, and that as soon as possible all the Departments now accommodated on Lambton Quay be gradually transferred to buildings to be erected on the Molesworth Street site.

7. So soon as this is carried into effect the block bounded by Lambton Quay, Featherston Street, Bunny Street, and Whitmore Street, on which the present wooden building stands, could be leased to the public in building allotments for a total rental which would provide interest on a large capital sum, the present value of the land being estimated by the Valuation Department at £264,000.

8. Your Committee therefore report that, in their opinion, the new Parliament Houses, including a new Library building, should be erected on the Government House site, and that the Molesworth Street site, including those portions of the old Parliamentary Buildings not destroyed by fire, should be utilized for departmental buildings and offices, and the old parliamentary lawn-tennis ground as a site for a building for the Museum, the Lambton Quay block to be eventually dealt with as above indicated; the sections and intersecting street-lines being laid off as shown in "Plan No. 2" as prepared by the Public Works Department: always provided that satisfactory arrangements can be made as between the Government and the City Council.

9. Your Committee desire to point out that the arrangements thus proposed will entail the necessity of providing a new site for Government House, the selection of which does not come within the order of reference.

15th September, 1908. WM. J. STEWARD, Chairman.

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1913.

NEW ZEALAND.

PUBLIC BUILDINGS

(PARTICULARS OF EXPENDITURE ON) FROM 1907–8 TO 1911–12, IN WELLINGTON, AUCKLAND, CHRISTCHURCH, AND DUNEDIN, AND COMMITMENTS REGARDING ON 31st MARCH, 1912.

Return to an Order of the House of Representatives dated the 24th October, 1912.

Ordered, "That there be laid before this House a return showing—(1) The total amount spent on public buildings from 31st March, 1907, to 31st March, 1912; (2) separate returns showing the amounts expended on public buildings in the Cities of Wellington, Auckland, Christchurch, and Dunedin from 31st March, 1907, to 31st March, 1912; (3) the commitments regarding proposed expenditure on public buildings on 31st March, 1912."—(Mr. Wilkinson.)

Return.

1. The total amount spent on public buildings from 31st March, 1907, to 31st March, 1912:—

£1,463,471.

2. The amounts expended on public buildings in the Cities of Wellington, Auckland, Christchurch, and Dunedin from 31st March, 1907, to 31st March, 1912:—

Wellington	£264,543
Auckland	£240,156
Christchurch	£112,126
Dunedin	£50,836

3. The commitments regarding proposed expenditure on public buildings on 31st March, 1912:—

£350,720.

Chas. E. Bennett, Accountant.

Public Works Office, Wellington, 21st April, 1913.

Approximate Cost of Paper.—Preparation, not given; printing (1,400 copies), £1.

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1913.
NEW ZEALAND.

PUBLIC BUILDINGS

(PREMIUMS THAT WOULD HAVE HAD TO BE PAID FOR INSURANCE OF), AND VALUE OF BUILDINGS DESTROYED, DURING LAST TEN YEARS.

Return to an Order of the House of Representatives dated the 29th August, 1912.

Ordered, "That there be laid before this House a return showing—(1) The amount of premiums that would have had to be paid to insure all public buildings in the Dominion (including school buildings) for the last ten years; and (2) the total value of all public buildings (including schools) that have been destroyed by fire during the same period."—(Mr. MYERS.)

RETURN.

1. THE amount of premiums that would have had to be paid to insure all public buildings in the Dominion (including school buildings) for the ten years ended 29th August, 1912: The amount cannot be given, but would probably amount to £300,000.

2. The total value of all public buildings (including schools) that have been destroyed by fire during the same period: Approximately, £100,000.

CHAS. E. BENNETT, Accountant.
H. J. H. BLOW, Under-Secretary.

Public Works Department, Wellington, 31st July, 1913.

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1913.
NEW ZEALAND.

HUTT ROAD

(REPORT OF COMMISSIONER *RE* ALLOCATION OF COST OF CONSTRUCTING).

Presented to both Houses of Parliament by Leave.

Public Works Department, Wellington, New Zealand, 19th June, 1913.
Memorandum for the Hon. the Minister of Railways, Wellington.

Re *Hutt Road.*

In pursuance of the direction contained in your Warrant of the 8th July, 1912, I have now the honour to submit for your information the following report on the allocation of the cost of constructing the new Hutt Road among the local authorities mentioned in the Hutt Railway and Road Improvement Amendment Act, 1911.

The inquiry was commenced on the 30th September, 1912, and continued on the 1st, 2nd, 5th, 6th, and 7th May, 1913, and the parties were represented as under :—

Wellington City Council	Mr. O'Shea.
Petone Borough	Messrs. T. F. Martin and R. C. Kirk.
Lower Hutt Borough	Mr. Blair.
Hutt County	Mr. Brandon.
Onslow Borough	Mr. Wilford, M.P.
Makara County	Mr. Luckie.
Johnsonville Town Board	Mr. Jerusalem.
Upper Hutt	Mr. D. M. Findlay.
Eastbourne Borough	Mr. Organ.
Miramar Borough	Messrs. M. Myers and R. V. S. Meredith.
Railway Department	At first by Mr. Ostler, afterwards by Mr. Macassay.

Preliminary Remarks.

In order to understand this report some reference must be made to the recent history of the case. This is shown in the Hon. Mr. Millar's speech on the Hutt Railway and Road Improvement Amendment Bill, 1911 (*Hansard*, 1st September, 1911, pages 204–240) ; and it is illuminative inasmuch as it discloses how the new road came to be made, and why it was made at so much greater cost than was originally proposed.

In 1887 the question of straightening the Hutt Railway first came before the Government, when a request was made that money should be provided for this purpose. In the years 1894, 1896, and 1898 Messrs. Duthie and Newman again brought up the subject. On the 17th July, 1899, a public meeting of the inhabitants of Petone and the Hutt Valley was held at Petone, when a resolution was passed urging the Government to straighten and duplicate the Hutt Railway between Wellington and Petone, and also urging that the road should be reconstructed when the railway-line was being straightened. A deputation subsequently waited on the Prime Minister on the 28th July, 1899, and asked that this should be done.

On the 5th May, 1900, the Wellington Chamber of Commerce wrote to the Minister of Railways urging him to reduce the curves on the railway, and suggesting that the carrying-out of this work would afford an opportunity to widen the road.

In September, 1900, Mr. Field, M.P., asked the Government to undertake the work, and pointed out that it was impossible for the local bodies within whose districts the road was situated to do it.

On the 17th September, 1900, a conference of local bodies and district members of Parliament was held at the Wellington Chamber of Commerce, when resolutions were carried requesting the Government to widen the road from Wellington to Petone to not less than 40 ft., and to arrange for the apportionment of a reasonable share of the net cost of such work among the local bodies concerned in the traffic on the road. The resolutions of this conference were signed, *inter alia*, by the Mayors of Wellington, Petone, and Onslow, the Chairmen of the Hutt County Council and the Johnsonville Town Board. I mention this because, as these persons represented all the local bodies then in existence which were interested in the road, it follows that, at this time, all were in agreement that the Government should undertake the work and apportion the cost of a 40 ft. road.

Nothing seems to have been done at once in pursuance of this request; but at the instance of the Borough of Onslow the Government appointed Mr. Haselden, S.M., on the 7th December, 1901, to be a Commissioner to apportion the cost of maintaining the portion of the road which runs through that borough. He reported on the 19th March, 1902, that in his opinion the cost of maintaining this portion of the road should be borne in certain proportions to be hereinafter mentioned, and effect was given to his report by a Governor's Warrant dated the 13th May, 1902. The Wellington City Council subsequently refused to pay its quota, and litigation followed, and it was ultimately decided by the Supreme Court that as the road was technically a street, and as the statute only referred to a road, the Warrant was *ultra vires* and inoperative.

To remedy this difficulty, and to enable Mr. Haselden's report to be given effect to, the Hutt Road Act, 1903, was passed, fixing the proportions to be paid by the parties, as arranged by him, as follows: Wellington City and Petone Borough, seven twenty-fourths each; and Onslow Borough and Lower Hutt Borough, five twenty-fourths each. It is necessary to remember in this connection that this apportionment related only to the part of the road (100 chains) in the Borough of Onslow.

Later in the same session of 1903 the Hutt Railway and Road Improvement Act was passed. This Act abolished the apportionment, and empowered the Minister of Railways to construct the road, and then to have the cost of same reapportioned among the Wellington City, Onslow, Petone, and Lower Hutt Boroughs, and the Hutt County Council.

After the Hutt Railway and Road Improvement Act, 1903, was passed, and the road had been assured, a conference of delegates from the local authorities was held, and among other things they suggested to the Government,—

(*a*.) That the road should be formed 100 ft. wide, and that it should contain a roadway 50 ft., cycle-track 15 ft., heavy-traffic track 25 ft., and footpath 10 ft. wide, the cycle-track to be in the middle of the road:

(*b*.) That the water-tables, footpath, cycle-track, roadways, and land be raised to such a level above high-water mark that proper drainage shall be assured:

(*c*.) That the gradients of the road be in no case flatter than 1 in 200, so as to give efficient drainage along the water-tables.

These proposals were a very great departure from the original proposal for a road 40 ft. wide, and it is apparently due to the requests of this conference that such an expensive road was afterwards constructed. The Railway Department did not, however, do all that was requested. It made the road 60 ft. wide and the footpath and cycle-track 20 ft. wide, total 80 ft.; and it would appear that the enormous quantity of 523,000 yards of earth, spawls, and metal used in the actual formation of the road was to some extent at least required to meet the wishes of the conference. This part of the work alone cost nearly £82,500.

After the Act of 1903 was passed, Makara County and the Boroughs of Eastbourne and Miramar and the Upper Hutt Town Board were constituted and separated from the Hutt County, and the Hutt Railway and Road Improvement Amendment Act, 1911, provided that all these bodies, together with the Johnsonville Town Board, should contribute to the cost of the road.

It was pleaded before me that none of the original local bodies had the remotest conception that the road would cost anything approaching to what it has cost, or they would never have agreed to the provisions of the Act of 1903. I believe that these statements are absolutely true.

No evidence was given to me to show to what extent the delegates to the conference of 1903 represented the wishes of their local bodies, nor whether all the local bodies were represented at such conference, but it is clear that if the local bodies authorized or allowed their delegates to make the extravagant demands they did, they ought not now to be surprised that the work has been very costly.

The apportionment in this case presents very great and unusual difficulties. The amount involved is very large, and the apportionment will therefore be exceedingly burdensome and distasteful to all the local authorities. The statute lays down no definite basis of apportionment, and the result of the inquiry demonstrated that it is impossible to make any apportionment that can be demonstrated mathematically or proved by the ordinary rules of evidence. In addition to this, there are no less than ten parties to the inquiry, all of whom are in the position of defendants, and who were represented by able and well-known lawyers.

As there was no party in the position of plaintiff, I called the parties together on the 30th September, 1912, and with their concurrence ordered a tally of traffic to be taken by the Railway Department. This tally was taken at various places on the road for a period of three weeks, night and day. The results were afterwards carefully compiled by the Railway Department, and taking each item of traffic as of equal value, and reducing all traffic that used only part of the road to a proportionate use of the whole road, it appeared that the ratio of traffic for each district was as follows, which for the purpose of this report I call Result No. 1:—

Wellington	43·55	per cent. of total traffic.
Petone	15·25	"
Lower Hutt	12·87	"
Hutt County	7·42	"
Onslow Borough	4·47	"
Makara County	11·71	"
Johnsonville	2·84	"
Miramar	0·13	"
Upper Hutt	1·48	"
Eastbourne	0·28	"

There being no statement of claim for the parties to answer, I adopted this result as showing *prima facie* what such claim might be, and I called upon the parties to show cause why the cost of the road should not be apportioned in that way accordingly, but I clearly stated that if any party was dissatisfied with these results it was open for such party to examine the tally-sheets and compile a summary therefrom, and also that I had not adopted these results as final.

When the parties appeared before me on the 1st May, 1913, the case was argued from this standpoint.

I will deal first with the legal questions which were raised at the inquiry, then I will consider the case against each district separately, but in considering the case against Wellington I will deal with all the main contentions that were raised in the case. Finally I will summarize my conclusions.

LEGAL QUESTIONS.

When the case was resumed on the 1st May, 1913, counsel for Onslow asked me to state a case for the opinion of the Supreme Court on the following points, before proceeding further:—

(1.) Whether I had any jurisdiction whatever to act as Commissioner.
(2.) If so, what procedure should be adopted in arriving at a basis for contribution.
(3.) Whether I had a right to apportion the contribution on—
    (*a.*) A capital-value basis;
    (*b.*) A population basis;
    (*c.*) A traffic-user basis.
(4.) Whether in considering the proportion of the traffic and the basis of aportionment, traffic should be debited to the place of origin or to the place of destination.
(5.) Whether in assessing the proportion payable by the Onslow Borough the value of the land gained by the Crown by the making of the road should be taken into consideration.

This proposition was supported by the counsel for Makara County and the Upper Hutt Town Board. It was contended by counsel for Onslow that I had no jurisdiction, but neither he nor any of the others gave any reasons whatever for such contention. As I believed that I had power to proceed, and as no *prima facie* reasons were given to show want of jurisdiction, I declined to stay proceedings; but promised that I would reserve the question as to the special case until after the evidence had been taken.

I have carefully considered the matter and have come to the conclusion that it would be a useless waste of time and money to state a special case. My reasons are—

(*a.*) I have only power to state a case where there is a *dispute on a point of law* (see section 10, Commissioners' Powers Act, 1908), and a mere assertion by defendants that I have no jurisdiction, without their giving evidence or argument to support such assertion, is not a dispute within the meaning of the statute.

(*b.*) The only ground, so far as I can see, on which it could be successfully contended that I have no jurisdiction arises from the fact that the Mackenzie Government tendered its resignation on the 6th July, 1912, and the Warrant of my appointment is signed by Mr. Myers, Minister of Railways, on the 8th July, 1912. It might therefore be held that he had then vacated office and that the appointment was bad; but the facts are that the Governor did not accept the resignation of the Mackenzie Government until the 10th July (see *Gazette*, 11th July, 1912). The Mackenzie Government, according to law and precedent, retained office until their resignation was accepted, and my appointment, made two days before then, is therefore valid. Even if it were held to be invalid, the fact that you, as Minister of Railways, personally directed me to proceed with the inquiry is alone sufficient to give jurisdiction.

As regards the other points upon which it was suggested I should state a special case, these are all questions of instruction or procedure, and there is direct authority for assuming that the Supreme Court will not give a Commissioner any such instructions. In the special case *re* Waipawa, Waipukurau, and Dannevirke cases (New Zealand Law Reports, xxvii, page 863), stated by me, the statute was silent as to the principles upon which the Commissioner should act in making the apportionment. In that case it will be seen that the Court decided that it would not lay down any legal rule for the guidance of a Commissioner in making such an apportionment, and that the matter is in the entire discretion of the Commissioner, who must proceed according to the principles of natural justice.

A direction of the Court would no doubt be most helpful in this difficult case, but, for reasons given above, I conclude that the Court would be unable to give any other directions than was given in the Waipawa case—viz., that I must proceed according to the principles of natural justice, and it is on these principles that I have endeavoured to base my award.

With reference to the question as to whether in assessing the proportion payable by Onslow I should consider the value of the land gained by the Crown by the making of the road, this question refers mainly to an area of flat land at Kaiwarra taken for railway purposes, and for which Onslow will lose the rates it could have collected therefrom if it had not been taken. I am of opinion that this has nothing to do with the question of apportioning the cost of the road.

Counsel for Petone also urged that I should credit any district with any part of the road closed in its district and sold, but it appears to me that this is a matter for adjustment in arriving at the cost of the road to the various parties, with which I have nothing to do.

A point was raised during the inquiry by counsel for Wellington that I am bound by the decision of Mr. Haselden, S.M., and that as the parties ultimately adopted his apportionment and allowed it to be embodied in the Hutt Road Act, 1903, the case is governed by the principle *Stare decisis* and is virtually *res judicata.*

This contention will not stand investigation. I have carefully read Mr. Haselden's report, which, by the way, deals with only about a third of the road. He entirely absolved the Hutt County from liability, because at that time the Hutt County controlled nearly all the rest of the road and had to maintain it for the benefit of traffic from Wellington, Lower Hutt, and Petone. He took into consideration the fact that Onslow had by law to maintain the part of the road which was the subject of the inquiry, but none of these facts are true at the present time; and he limited his apportionment to four cities or boroughs only—Wellington, Petone, Lower Hutt, and Onslow. The present law requires that the cost shall be borne by ten local bodies, including the adjacent counties, so that Mr. Haselden's apportionment cannot be adopted. Even if it be held that I must be guided as regards Wellington and Petone by his report I find that the nature of the traffic has changed. In the tallies of traffic taken for the purposes of that inquiry no mention is made of motor-cars, which were then almost unknown. Now they are very numerous, especially from Wellington.

The population of Wellington as disclosed by Mr. Haselden's report was 43,638, and the capital value was £7,372,342. The figures are now 64,372 and £18,228,584 respectively, and most of the other districts except the Hutt County show similar disparity.

The conditions now are therefore totally different from what they were when Mr. Haselden's report was made.

Mr. Haselden does not attempt to explain the basis on which he made his apportionment, neither does he argue the case to a definite conclusion. He gives a simple award, after considering the facts as they appeared to him at the time. He does not say what those facts were, and as I do not know, and with all respect to him, I cannot therefore be bound by his decision, but I have not departed therefrom in any case without full consideration.

CONSIDERATION OF THE CASE IN RESPECT TO EACH PARTY.

Wellington.

Wellington objects to contribute 43·55 per cent. of the cost, as disclosed by Result No. 1. It objects, among other things, to the assessment being made on the traffic valuation or rateable basis. Its counsel contends that the assessment cannot be determined by a numerical ratio. He also contends "that the Commissioner is in the position of a Judge without a jury, and must inform himself as to the law, and then act as a jury, and in so doing he must take note of every factor and weigh these matters accurately and clearly. He must pay full regard to previous decisions and carefully consider the basis of existing legislation." With much of this I am in full accord, and I will say at once that in my opinion the apportionment cannot be made on the basis of ratio traffic alone, but the law in a case like this evidently requires me to consider traffic as an important factor.

The general law on the subject is to be found in section 109 of the Public Works Act, 1908. This section, in its original form in the Public Works Amendment Act, 1900, was intended to meet the case of the Hutt Road, and Mr. Haselden's report is based upon it.

Section 109 of the Public Works Act, 1908, requires a local body to contribute if the road affords access to its district *and the road is largely used by or for the purpose of traffic* to or from such district. This section also applies the provisions of section 119 of the Act to the construction of a road. The last-mentioned section implies that a local body must contribute if the work is of advantage and benefit to the whole or a considerable portion of its inhabitants, and it is just and equitable that it should so contribute. This is the general law, and there are no other enactments that conflict with this. If, therefore, this apportionment were being made under the general law, I should be required to ascertain, first of all, the use of the road by traffic; secondly, I should be required to find out whether or not it gave access to the district to be charged; thirdly, whether the road benefited or was likely to be of advantage and benefit to a considerable portion of the district to be charged; and, lastly, whether it is just and equitable that the charge should be made.

The Hutt Railway and Road Improvement Act, 1903, and its amendments lays down no basis or form of procedure. It simply provides for the appointment of a Commissioner to make the apportionment. In so doing, it evidently assumes that the Commissioner will follow the principles of the general law. Even if the act of 1903 does not imply this, then the direction of the Supreme Court in the case already quoted of the Waipawa, Waipukurau, and Dannevirke Counties is in point. Under that decision the Commissioner must proceed according to the principles of natural justice, and it is difficult to see how the principles of natural justice can be better applied to this case, save and except in the manner set forth in the general law above referred to.

I shall therefore consider, first of all, the use made of the road for the purposes of traffic to and from Wellington; then I will consider the other equities.

The summary of the tally of traffic taken by the Railway Department (Result No. 1) shows that, counting each item of traffic separately, there were 26,505 items that affected the districts who are required to contribute, and the proportionate use on this basis is stated in Result No. 1 already given. Some of the parties, however, contended that a proportion based on these lines was unfair, inasmuch as it does not discriminate between heavy and light traffic, and that a bicycle or a sheep counts thereunder as much as a wagon or a motor-car, and that, as the road was built for heavy traffic, that sort of traffic should be a much greater debit to the district from which it comes, or to which it goes, than does a bicycle or any other light traffic. I have therefore, for the sake of comparison, reduced the whole traffic to the equivalent of "heavy traffic." In doing so, I have followed the figures supplied to the parties at the inquiry, and I have also reduced such traffic to an equivalent use of the whole road, where such traffic used only part of the road.

I do not suppose my formula for reducing light to heavy traffic will escape criticism. It is a subject on which few people will agree. I trust, however, that the following will be accepted as not unreasonable. This formula is based on the definition of "heavy traffic" in section 139, Public Works Act, 1908, which is 1½ tons to a pair of wheels. This, of course, means a dray 1½ tons or a wagon or lorry 3 tons. I consider that a wagon or lorry is equal to two drays. A dray is usually equal to three light traps or carts. A light cart or trap usually can carry four people, and it is therefore equal to four bicycles. A motor-car may not be as heavy as a loaded wagon. It is often heavier than a dray, but as it has no horses, I conclude that its effect on the road when going at speed is equal to a dray. I therefore assess it as equal to a dray. I assess ten cattle or thirty sheep as equal to a lorry.

As already stated, the results of the tally of traffic shows that during the time it was taken 26,503 items of traffic used the road or parts of it. This number is equal to a use of the whole road of 12,364 items of traffic, and it is on this basis that the proportions of traffic in Result No. 1 are founded.

On exactly the same basis, and following exactly the same methods, but reducing all the traffic to an equality of heavy traffic in accordance with the above formula, I find that the 26,503 items of traffic are equal to the traffic of 3,575 lorries or wagons for the whole road, and the result as between the parties on this basis, which for the purpose of this report I shall call Result No. 2, is—

Wellington	1,693·04	= 47·36	per cent.
Petone	484·12	= 13·54	
Lower Hutt	474·73	= 13·27	
Hutt County	301·86	= 8·44	
Onslow	108·26	= 3·03	
Makara	355·50	= 9·95	
Johnsonville	80·36	= 2·25	
Miramar	9·56	= 0·27	
Upper Hutt	55·58	= 1·56	
Eastbourne	12·00	= 0·33	
	3,575·01	100	

Some of the parties contended that the true method of arriving at a ratio of traffic as showing its benefit to the various districts was to take the place of origin of the traffic. An attempt was made in taking the tally of traffic to ascertain the place of residence of the owners, but the return was not quite complete, owing to difficulties which the tally clerks experienced in obtaining the information. So far as it goes, it went to show that, not including bicycles, 17,467 vehicles, of which the owners are known, used the whole or parts of the road. The use of the road on this basis, which for the purpose of this report I shall call Result No. 3, was—

Wellington	7,640	= 43·74	per cent.
Petone	2,239	= 12·94	,,
Lower Hutt	1,368	= 7·84	,,
Hutt County	565	= 3·23	,,
Onslow	2,228	= 12·75	,,
Makara	2,425	= 13·90	,,
Johnsonville	860	= 4·92	,,
Miramar	30	= 0·17	,,
Upper Hutt	58	= 0·32	,,
Eastbourne	34	= 0·19	,,
	17,467	100	,,

This result is somewhat remarkable in so far as Wellington is concerned. It is almost the same as Result No. 1, and it is not very far removed from Result No. 2, and it is very close to the ratio of traffic for Wellington, as shown in Mr. Haselden's report, thus:—

Result No. 1	= 43·55	per cent.
Result No. 2	= 47·36	,,
Result No. 3	= 43·74	,,
Mr. Haselden's report	= 44·3	,,

This clearly demonstrates the fact that at least 44 per cent. of the total traffic, or 47 per cent. of the heavy traffic, using the road either comes from or goes to Wellington.

Counsel for Wellington pleaded that the traffic was not a true basis for apportionment. He contended that the test was the economic dependence of each district on the road. By "economic dependence" he appeared to mean the dependence of a district for its very life on the existence of the road: thus parts of Makara and Hutt County and Onslow Borough would suffer severely if the road did not exist, but he contended that Wellington would not suffer proportionately, as it has two railways as arteries for traffic. This contention is open to serious doubt, because the other districts are also served by railways. He also contended that the economic dependence was in the following order of dependency, viz.:—

(1.) Makara and Hutt Counties, Onslow, and Johnsonville.
(2.) Petone and Lower Hutt Boroughs, and Upper Hutt Town Board.
(3.) Wellington City, Miramar Borough, and Eastbourne.

Under this argument it will be seen that the assumption is that the Hutt Road is three times more valuable to the districts mentioned in No. 1 than it is to those in No. 3, or twice as valuable to those in No. 2 as to those in No. 3, or only two-thirds as valuable to those in No. 2 as to those in No. 1. This contention is, I think, on the face of it, unreasonable.

There were some other contentions raised by the counsel for Wellington, which I will deal with later on.

Only one witness—viz., the City Engineer—was produced to support the Wellington case, and he tried with great ability and ingenuity to do so. He contended that as the request for improvement of this road came from outside bodies, they should bear the greater part of this cost, and that as Wellington was a receiving and distributing depot, and as much of the goods that came along the Hutt Road went direct to the wharves, this traffic did not benefit the city, and should not be debited to it. He contended also that the contiguity and the area of land benefited by the road should be considered. He proceeded to show that the apportionment should be decided by factors: that is to say, he based his scheme of apportionment on acreage of land benefited. He assumed that the factor of 3 represented extreme benefit, and lessor factors for lesser benefits. He propounded the following scheme, viz.:—

District.	Area benefited.	Represented by Factor of	Giving Assumed Value of	Shows Apportionment of Cost.
	Acres.		£	Per Cent.
Wellington	1,200	3	3,000	24·90
,, ...	8,300	½	4,150	
Onslow	1,000	3	3,000	12·52
,, ...	1,000	1	1,000	
Petone	1,060	3	3,180	10·22
Lower Hutt	3,255	1	3.255	10·44
Eastbourne	1,380	⅓	460	1·50
Miramar	2,250	⅓	750	2·41
Hutt County	309,210	$\frac{1}{40}$	7,500	24·10
Makara	64,640	$\frac{1}{20}$	3.230	10·38
Johnsonville	1,140	½	570	1·83
Upper Hutt	1,280	⅓	430	1·40

The difficulty in making an apportionment on any such basis as this is that the allocation of factors in this way is purely arbitrary and guesswork, and no two people would be likely to value the factors alike. He could not prove why he fixed these factors other than it was his opinion that these factors should be chosen. No other evidence was given in proof of this system of apportionment, and none of the other parties supported it. It is admittedly based on area and contiguity, and not on use and benefit as required by the general law, though of course he must have considered use and benefit in allocating his factors. The results which he arrives at are extraordinary. Thus a proposal to charge the Hutt County with almost the same proportion as Wellington is evidently quite unjust. His evidence is, however, useful, as it impliedly admits that Wellington should at least pay 25 per cent. It is also remarkably that with the exception of Wellington and Hutt County, the other results are not very far different from Results Nos. 1 and 2, disclosed by the traffic, and to that extent the City Engineer's evidence supports the evidence of these results.

As regards the contention that some of the heavy traffic goes direct to the wharves, and does not benefit the city, this I think is true. These wharves are vested in a wealthy Harbour Board, and it was contended that that Board ought to have been a party to contribute. This has not been done, and as a good deal of the heavy traffic comes by road direct to the wharves the City of Wellington gets no benefit therefrom, but gets its roads damaged thereby. I am of opinion that this should reduce the Wellington quota somewhat, and I have allowed a substantial reduction on this account.

It was contended also that trade from the outside districts uses the continuation of the Hutt Road in the city. In my opinion the city gets its *quid pro quo* for this, for every main avenue that brings traffic by easy means from outside districts to the city is a direct benefit to the city. Moreover, the city traffic uses the roads of the outside districts without toll or other charge.

It was contended by some of the other parties that rateable value, population, and revenue should be considered in making the apportionment. This was opposed by Wellington, and rightly so. In my opinion neither of these would form a fair basis. If either of them were taken, Wellington would be debited as follows: Rateable value, 72·86 per cent.; population, 72·79 per cent.; total receipts, 76·14 per cent.: and to use any of these as a basis of apportionment would be grossly unfair.

As regards the benefit of the Hutt Road to Wellington, this road is peculiar inasmuch as it is its one and only great artery for traffic, other than railway traffic. The traffic on the three or four roads to Makara, Karori, Johnsonville, &c., are not comparable with it. The Hutt Road is now largely used by Wellington for pleasure traffic by motor and cycle, and this will increase as motors get reduced in price and population increases.

The outside districts get little advantage from this class of traffic, and they claim that Wellington should pay for it. In addition to this, 14 chains of the road are actually in the city, and the city has been relieved of the cost of constructing this portion, and this must be a debit against the city in making the apportionment. (See my remarks against Onslow and Makara later on.) It is also a fact that the city water-mains traverse the whole road, and, although Wellington has a statutory right to place them there, it helps to show how very valuable the road is to Wellington. This road is also used by the City Corporation from time to time in carting heavy material to its waterworks at Wainuiomata.

If the road were a bridge joining Wellington to the other districts, the evidence given could justify an assessment of nearly 50 per cent. against Wellington. The road is a line somewhat analogous to a bridge, but as other considerations come into this case that do not apply to a bridge, it is clear that so great an assessment cannot be made. The City Solicitor claims that Wellington should not pay more than 20 per cent., but his own witness admits that about 25 per cent. is payable, and, moreover, under Mr. Haselden's apportionment, which was afterwards accepted by the city, it would have had to pay 29·16 per cent. for part of the road, while the use of the whole road reduced to the equality of heavy traffic shows that Wellington's share is 47·36 per cent. of the whole.

The foregoing facts show that Wellington has failed to prove that its interests in the road are as small as it contends; and, after considering all the equities to the contrary pleaded before me, and after allowing for these and for the fact that some of the heavy traffic debited to Wellington goes to the wharves and is no direct benefit to Wellington, I am of opinion that if, say, about 10 per cent. is deducted from the results of heavy traffic to cover all these things, thus leaving, say, 38 per cent., this would be a just proportion for Wellington to pay, and after most carefully considering all the facts of this difficult case I am unable to see that equity can be satisfied with any less contribution.

Petone.

In this case the use of the road by or for the purpose of Petone is shown in—

Result No. 1	15·25 per cent.
Result No. 2	13·54 ,,
Result No. 3	12·94 ,,
Mr. Haselden's report	16·6 ,,

Petone pleads that its main road, which is a continuation of the Hutt Road, is used by traffic from all the other districts, and this should be taken in mitigation of the amount it would otherwise have to pay. Some slight reduction should, I think, be allowed for this, but it must be remembered that much of its traffic uses the Wellington streets. It also pleads that much of the heavy traffic from Petone comes from the freezing-works, which is largely a Wellington company, and that this should be considered in reduction. The industry is, however, a Petone industry, and as such Petone must shoulder its own burden, and should levy such rates on the property, or levy such license fees on the vehicles that use the road, as will recoup itself and make this company pay a fair share of the burden of the borough. No proof was given that the bulk of the shareholders in the Freezing Company resided in Wellington.

Much of the argument of the two learned counsel who represented Petone was directed towards showing what some of the other districts ought to pay, and it appeared to me that this was done for fear I should follow Mr. Haselden's apportionment, which was seven twenty-fourths or about 29 per cent. of the cost against Petone. I have tried to ascertain why he assessed Petone at such a high rate, but cannot find the reason. The traffic returns certainly did not support it, and I can only assume that he considered that Petone was specially dependent upon the road, and that there was a great future development before it.

The evidence before me did not disclose any special dependency, but it showed that the road is largely used by it, and for this reason the road must be of considerable benefit to it. I think, also, that there is something to be said as to the future development of Petone, and the benefit of the road in connection with the same. I am of opinion that both by its position and by the fact of its large area of flat ground, Petone will ultimately become the main manufacturing centre for the Wellington District, and that there will be a dense population extending to the Lower Hutt. It has a water-frontage which may be made better use of as time goes on than it is at present. It has several large industries, and another one is about to start, and any day may see some cheap mechanical traction invented that will successfully compete on the road against the railway and thus benefit these industries. The opening of the new Hutt Bridge will divert traffic through Petone that now goes by way of Lower Hutt, and I am of opinion that as this advance takes place, the Hutt Road will be of much more use proportionately to Petone than to any other district. For these reasons, and allowing something off for the use of its main road, but adding something from the fact that 3 chains of the road are in Petone Borough, it appears to be just that Petone should pay a larger contribution than is indicated by the results of the tally of traffic, and after full consideration I assess this contribution at 18 per cent.

Lower Hutt.

The use of the road for the purposes of this district is shown by—

Result No. 1	12·87 per cent.
Result No. 2	13·27 ,,
Result No. 3	7·84 ..
Mr. Haselden's report	17·06 ,,

He assessed the borough at five twenty-fourths or 20·8 per cent. In this case also, I think, he must have taken into account the fact of the future development of the borough. In my opinion this will take place as Petone develops, but not at first to the same extent. For this reason, and as the quota of heavy traffic concerning this district is only 13·27 per cent., and after most carefully considering the matter, I assess the Lower Hutt at 14 per cent.

Hutt County.

In this case the use of the road for the purposes of the county is shown in—

Result No. 1 as	7·42 per cent.
Result No. 2 as	8·44 ,,
Result No. 3 as	3·23 ,,
Mr. Haselden's report	20·05 ,,

But this latter was before Onslow Borough and Makara County were separated from the Hutt County.

It is clear that the Hutt County does not derive anything like so much benefit from the road as do some of the other districts. The part of the county at all likely to use this road lies several miles away from it. This county is mostly rough and broken, and is hardly of a character to carry a great population or be of much value, and I do not think that traffic from the county will increase in the same proportion as in other districts. Taking all facts into consideration, I think that about 8 per cent. would be a fair assessment.

Counsel for the Hutt County propounded a scheme of apportionment based on the mean results of the total of traffic valuation and population for each district, and, to evade the difficulty which is obvious under such an apportionment by which Wellington would be severely dealt with, he doubled the results in cases where he contended that the outside districts would increase largely in the future. This method of doubling values is, however, purely arbitrary, and not, in my opinion, based either on the provision of the general law or on any ascertained facts, and I cannot therefore recommend that this scheme be adopted.

Onslow Borough.

The results in this case are—

Result No. 1	4·47 per cent.
Result No. 2	3·03 ,,
Result No. 3	12·75 ,,

This last result differs from the others, because the two former are reduced to a comparative use of the whole road, whereas the last represents total ownership, without reference to the use of the road.

The ratio of traffic shown in Results Nos. 1 and 2 in this case do not indicate a just apportionment, because the road forms the main street in the Borough of Onslow. In other words, this portion of the road amounts to about 24 per cent. of the whole road which is the subject of the present claim.

According to Mr. Haselden's report, Onslow was required to contribute five twenty-fourths or 20·8 per cent. of the cost. This very high assessment was evidently imposed because the borough was by law required to keep this part of the road at its own cost, and it was only because it could under the Public Works Act get some assistance from outside districts that this burden was to some extent lifted from its shoulders.

The same thing is, in a measure, true to-day, only that some other authority is now charged with the construction of the road, and later on another body will be entrusted with its maintenance, but this ought not equitably to relieve the Borough of Onslow of its just quota of liability to contribute. The Borough of Onslow has therefore a duty to contribute to the road as being its main thoroughfare, quite apart from the question as to how much its traffic uses the other parts of the road.

If this were a simple case the measure of contribution would be the difference between the total cost of the road, sufficient to carry Onslow traffic, and the extra expense caused by having to make a road sufficiently strong and wide to carry traffic from outside districts as well. Mr. Haselden assessed this at 20·8 per cent. This is equal to 5 per cent. for the whole road.

The cost of the road in Onslow alone has been approximately nearly £24,000. This has only benefited Onslow to a small extent; but if the local bodies are to pay for constructing the road, it does not appear to be at all unreasonable that Onslow should pay something additional towards this cost as well as something for its use of the other parts of the road, and which use Result No. 2 shows is equal to about 3 per cent. for heavy traffic. Taking these facts into consideration, I conclude that it ought to pay 6 per cent. of the cost.

Makara County.

The traffic on the road which concerns Makara County is shown to be—

Result No. 1	11·71 per cent.
Result No. 2	9·95 ,,
Result No. 3	13·90 ,,

This shows a very considerable use of the road for the purpose of traffic to and from Makara County. The County contends, however, that the road is of very little use to its inhabitants, and that its main use, so far as Makara is concerned, is in respect to traffic to and from the Meat Export Company and the Wellington City Corporation abattoirs at Ngahauranga, and also from the quarry in Ngahauranga Gorge, in all of which industries Makara derives very little profit and small rates. It contends also that the abattoirs are an industry carried on by the Wellington City Council, and that the traffic to and from these abattoirs should be debited to the city.

In so far as the question of small rates and little use is concerned, Onslow must bear its own burden in the same way as Petone and other places have to do theirs; but as regards traffic to and from the abattoirs there appears to be some slight equity in favour of Onslow and as against Wellington City.

There is one very strong equity against Makara, inasmuch as 3 miles 26 chains 28 links of the road are wholly within the county. The County pleads that the reconstruction of this part of the road has not benefited the adjacent land at all, as it is precipitous and steep. This I think is true, but no evidence was given to show that the reconstruction of the road had increased values in any other district, save and except perhaps to a slight extent at Kaiwarra. The fact also remains that it was the legal duty of the Makara County to keep the road in proper order for traffic, and that as the result of the statute has been to relieve the county of its full burden, it ought in equity to the other bodies bear its fair share of the same, and this share cannot be determined by the quota only of traffic in respect to which its people derive benefit. In this respect Makara and Onslow are on a different footing from the rest of the districts.

The approximate cost of constructing the 266 chains of the road in Makara County is somewhat over £60,000, and the share of this sum properly chargeable to Makara in any ordinary case would be the cost of a road reasonably sufficient for its own traffic. What that cost would be is now almost impossible to estimate. The county would probably say that the old road was good enough for its traffic. The fact is that Parliament has ordered that a new road should be made, and that Makara should contribute thereto; and, this being so, and judging by its use of the new road as disclosed by the tallies of traffic, and taking all other equities into consideration, and after allowing a fair reduction for the abattoir traffic, I am of opinion that Makara ought justly to bear 12 per cent. of the cost.

Johnsonville Town Board.

The use of the road for the purposes of Johnsonville as shown by the tallies of traffic is as under:—

Result No. 1	2·84 per cent.
Result No. 2	2·25 ,,
Result No. 3	4·92 ,,

The first two results relate to a comparative use of the whole road; the last one for the most part refers to a partial use of the road—viz., from Ngahauranga to Wellington. If the 4·92 per cent. is reduced to a comparative use of the whole road, it gives the result of about 2·03 per cent. for the whole road.

It is clear from the other evidence that Johnsonville does not use the road very largely, and that the reconstruction of the road has not benefited the town appreciably.

It was proved that the tally of traffic was slightly incorrect in so far as Johnsonville is concerned, and, taking all these and other facts into consideration, and allowing for expansion when the Ngahauranga Gorge Road is improved, and comparing it with the Upper Hutt Town Board, I am of opinion that if it paid 2 per cent. of the cost it would be fair.

Miramar.

Very little traffic from this district uses the road, and it is manifest from its geographical position that the road never can be of much advantage to Miramar. The traffic in which Miramar is interested was—

Result No. 1	0·13 per cent.
Result No. 2	0·27 ,,
Result No. 3	0·17 ,,

This would only support an apportionment of, say, 0·20 per cent., or say, in round numbers, ¼ per cent.; and this I consider is the limit of its interest.

Upper Hutt Town Board.

The evidence in this case did not prove any great use of the road by or for the purposes of the Board. The results of the tallies of the traffic are—

Result No. 1	1·48 per cent.
Result No. 2	1·50 ,,
Result No. 3	0·32 ,,

From these results it appears that very few of the vehicles using the road are owned in the Upper Hutt, but it is clear that its use for heavy traffic is equal to 1½ per cent. of the whole. It is true that some slight errors were made in the tallies which would reduce this somewhat; and, this being so, the facts, in my opinion, prove that it ought to pay 1¼ per cent. of the cost.

Eastbourne.

The results of the tallies of traffic in this case shew a very small use. They are—

Result No. 1	0·28 per cent.
Result No. 2	0·33 „
Result No. 3	0·19 „

This will not support a large contribution. I think, however, that something should be allowed for expansion. Eastbourne will be closer by road to the Hutt Road now that the new Hutt Bridge will be opened, and this will induce traffic to it. Counsel for Eastbourne pleaded that the main connection between it and Wellington was by steamer, and this is true. At the same time I am of opinion that with the great increase in motor vehicles which is evidently coming, the Borough of Eastbourne will be brought into much closer touch with Wellington than is now the case, for ten or fifteen miles is nothing for a modern motor-car. I consider, therefore, that it is fair that Eastbourne should bear ½ per cent. of the cost.

CONCLUSION.

For reasons already given I hereby report that in my opinion the evidence shows that the cost of forming and constructing the new Hutt Road ought to be borne in the following proportions:—

Wellington City	38 per cent. of the cost.
Petone Borough	18 „ „
Lower Hutt Borough	14 „ „
Makara County	12 „ ..
Hutt County	8 .. ..
Onslow Borough	6 .. ..
Johnsonville Town Board	2 „ ..
Upper Hutt Town Board	1¼ .. ..
Eastbourne Borough	½ .. ..
Miramar Borough	¼ „ „
	100

The effect of this apportionment or any other apportionment will, if adopted, be very severely felt by all the local bodies, for in addition to their share of the future cost of maintaining the road, they will also have to contribute annually the following amounts as interest and sinking fund (at 5 per cent.) on the cost of the road, assuming that it has cost about £100,000 as is alleged by the Railway Department, viz.:—

	£
Wellington City	1,900 a year.
Petone Borough	900 „
Lower Hutt Borough	700 „
Makara County	600 ..
Hutt County	400 „
Onslow Borough	300 „
Johnsonville Town Board	100 ..
Upper Hutt Town Board	62 10s. a year.
Eastbourne Borough	25 „
Miramar Borough	12 10s. „
	£5,000

The parties contend that this is a colonial work, and they asked me to bring the above facts before your notice, in the hope that under the peculiar circumstances connected with this case the Government would see its way to reduce the claim against the local bodies to £25,000. I have done so, but, as this is a question of policy, it is not fitting that I should express any opinion thereon.

I have, &c.,
W. S. SHORT, Commissioner.

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1913.
NEW ZEALAND.

MIDLAND RAILWAY

(EXPENDITURE ON), AND LAND-GRANTS TO THE MIDLAND RAILWAY COMPANY.

Return to an Order of the House of Representatives dated the 17th October, 1912.

Ordered, "That there be laid before this House a return showing the total amount spent in constructing the Midland Railway (*a*) from Brunnerton to the Otira Tunnel, (*b*) from Springfield to the Otira Tunnel, and (*c*) the Otira Tunnel; such return also to show the value of land-grants given to the Midland Railway Company for constructing portions of the above sections of railway."—(Mr. LANG, for the Hon. Sir A. R. GUINNESS.)

RETURN showing—(1) The TOTAL AMOUNT spent in constructing the MIDLAND RAILWAY (*a*) from Brunnerton to the Otira Tunnel, (*b*) from Springfield to the Otira Tunnel, and (*c*) the Otira Tunnel; (2) the VALUE of LAND-GRANTS given to the MIDLAND RAILWAY COMPANY for constructing Portions of the above Sections of Railway.

	£	£
1. (*a*.) Brunnerton to Otira Tunnel—		
Expended by or on behalf of the Midland Railway Company, as per valuation Table 3, Public Works Statement	263,889	
Expended by the New Zealand Government	198,479	
		462,368
(*b*.) Springfield to Otira Tunnel—		
Expended by or on behalf of the Midland Railway Company ..	61,579	
Expended by the New Zealand Government	675,164	
		736,743
(*c*.) Otira Tunnel—		
Expenditure by the New Zealand Government		257,533
2. The total value of land-grants given to the Midland Railway Company		320,000

CHAS. E. BENNETT, Accountant.

Public Works Office, Wellington, 1st April, 1913.

Approximate Cost of Paper.—Preparation, not given; for printing (1,400 copies), £1.

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1914

1913.
NEW ZEALAND.

EXPENDITURE OF RAILWAY DEPARTMENT

CAUSED BY INCREASES OF SALARIES AND WAGES PROVIDED FOR IN THE RAILWAYS AMENDMENT ACT, 1912.

Return to an Order of the House of Representatives dated the 25th July, 1913.

Ordered, "That there be laid before this House a return showing the increased expenditure of the Railway Department during the year ended 31st March, 1913, caused by the increases of salaries and wages provided for in the Railways Amendment Act, 1912, such return to show the increase in each division."—(Mr. Russell.)

Return showing Increased Expenditure of the Railway Department during the Year ended 31st March, 1913, caused by the Increases of Salaries and Wages provided for in the Railways Amendment Act, 1912.

As the provisions of the Government Railways Amendment Act, 1912, did not come into operation until 1st April, 1913, the increased expenditure due to the increases provided therein for the year ended 31st March, 1913, is nil.

In January, 1912, an allowance was granted to members in receipt of a wage of less than 9s. per day to bring their pay up to that amount, and to give a number of those in receipt of more than 9s. per day a relatively higher remuneration; also to increase the minimum pay of married members from £133 to £140 17s. per annum.

The Government Railways Amendment Act, 1912, made these allowances, which increased the working-expenses by £44,316 per annum, statutory rates, and to this extent the Act of 1912 may be said to have increased the expenditure for financial year 1912–13.

T. Ronayne,
General Manager.

Approximate Cost of Paper.—Preparation, not given; printing (1,400 copies), £1.

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1913.
NEW ZEALAND.

REPORTS ON RAILWAY ROUTES FROM WELLINGTON TO WAIRARAPA

MADE BY SURVEYORS YEARS AGO.

Return to an Order of the House of Representatives dated the 9th July, 1913.

Ordered, "That there be laid before this House the reports made years ago by surveyors of the various suggested railway routes from Wellington to the Wairarapa."—(Dr. A. K. NEWMAN.)

WELLINGTON–NAPIER RAILWAY: REPORTS ON ALTERNATIVE ROUTES FOR RIMUTAKA DEVIATION.

(APPENDIX J, PUBLIC WORKS STATEMENT, 1899.)

WELLINGTON–NAPIER RAILWAY: REPORT ON ALTERNATIVE ROUTES FOR DEVIATION OF LINE IN ORDER TO AVOID THE FELL INCLINE OVER THE RIMUTAKA, BY MR. P. S. HAY, M.A., M.INST.C.E.

Mr. P. S. HAY to the ENGINEER-IN-CHIEF.

SIR,— Public Works Office, Wellington, 19th August, 1899.

I have the honour to make the following report on the various possible routes for the proposed deviation of the railway-line over the Rimutaka, to avoid the steep gradients and sharp curvature between the Upper Hutt and the Summit Station and the Fell Incline. This report is based on the results of Mr. J. H. Dobson's surveys and explorations, and on my own inspections of the country through which the proposed deviations via the Coach-road Saddle and the Tauherenikau would pass.

To avoid the Fell Incline a trial line was surveyed by Mr. Dobson, starting from a point about three-quarters of a mile beyond Kaitoke Station and ending at Featherston. This line follows the coach-road gullies; it has been levelled and cross-sections have been taken, so that the quantities and estimates may be taken as correct, except in so far as they might be altered by minor deviations of the finally located line. From about the two-mile peg on the above line a traverse has been run via the Tauherenikau River to Woodside Station, but only aneroid levels have as yet been taken along this route to determine the heights of the principal points.

To avoid the 1-in-35 grades and numerous 5-chain curves on the existing line from the Upper Hutt to Kaitoke, a trial traverse with aneroid levels has been run from the Upper Hutt Station along the slopes of the Hutt Valley and through a low saddle near Kaitoke into the Pakuratahi Valley, to join the Road Saddle and Tauherenikau routes near the Pakuratahi River; this is No. 1 line on the plan. A variation of this line, No. 2 on plan, has been run to get flatter grades and a crossing of Mungaroa Valley without a viaduct. These lines do not utilize any portion of the existing line. To ascertain if any portions of the existing line could be advantageously used, No. 3 trial line was run, and a variation of it, No. 4. The ruling gradient adopted in running all these lines was 1 in 60, and the sharpest curve allowed for was 10 chains radius. The gorge of the Hutt River was also examined to ascertain if it was possible to take the line via the Hutt River and Pakuratahi River to join the Tauherenikau or Road Saddle routes.

In addition to the above, Mr. Dobson examined a suggested route starting from the existing line at Ladle Bend and crossing the Rimutaka by Lucena's Pass. This he reports impracticable. He also examined a suggested route starting from the Mungaroa flats, and thence through the lowest country to Cross Creek and Pigeon Bush; this he reports impracticable, except with a five-miles tunnel. He also examined the proposed route via the Wainuiomata, Orongorongo, and Wairongomai, and confirmed Mr. Rochfort's condemnation of it. The length of line to be constructed by this route would not be less than thirty-four miles, of which over twenty miles would be on 1-in-40 gradient. It is evidently not a promising route, though it is urged in his favour that it would be better for settlement than any of the other routes, and would not cut off any of the country now served by the railway.

The trial line from Kaitoke to Featherston via the Road Saddle shows that a line can be got of the following general character: Grades—Kaitoke to the Summit Tunnel, 1 in 55; sharpest curve on this gradient, 10 chains radius; Summit level, 995 ft. above datum (present Summit 1,244 ft. above datum); length of Summit Tunnel, 143 chains; grade in tunnel, 1 in 60, falling towards Featherston (in the final location this grade would be put all on the straight, a flatter grade being put where the curve occurs); grade tunnel to Featherston, 1 in 40; sharpest curve on this grade, 10 chains radius. In addition to the tunnel 143 chains long, the other works of any note are a bridge across the Pakuratahi River, also bridges over the Rimutaka, Tidswell's, Beal's, and Cave's Creeks. There are no particularly heavy earthworks. The line joins the existing railway about 23 chains south of the Featherston Station. Its length is about 9 miles 66 chains, and the estimated cost is £181,200.

To get a grade of 1 in 55, with perhaps somewhat sharper curves than 10 chains radius, it would be necessary to lengthen the deviation and join the existing railway about three-quarters of a mile beyond the Featherston Station. This would increase the cost of this deviation to about £194,000, as estimated by Mr. Dobson; but I think this amount is rather little.

The grades obtainable on either of the above lines do not compare favourably with those obtainable by the Tauherenikau route, and I have examined the country between Abbott's Creek and Fernside and Woodside Stations to ascertain approximately what grades could be got by running the line either to Fernside Station or to Woodside Station—in this latter case crossing the Tauherenikau River at as high a level as possible in order to get the flattest possible grade.

If a line were constructed from the Road Saddle Tunnel down the left side of Abbott's Creek, and along the hillsides beyond Featherston to Fernside Station, the continuous grade obtainable, assuming the grade through the tunnel was 1 in 70 on the straight, would be about 1 in 75; with the grades where on curves flattened proportionately to the curvature, this line would probably give a working gradient no worse than 1 in 66 on the straight, depending on the relative amount of straight to curved line in the section. The works would be much heavier than for the 1-in-55 line; in addition to larger bridges or viaducts being required for the tributaries of Abbott's Creek, a viaduct of about 150 ft. in height and of considerable length would be required over Boar Bush Creek behind Featherston. On the hillsides to the south of this creek there is a large slip, or, rather, dislocation of the ground, reaching up to about the grade-level; but I do not know that this would be an important factor, as probably a moderate cutting would take the line back into solid ground. The cost of this alternative deviation, Kaitoke to Fernside, may be taken as £260,000. Better grades than those on the trial line would be required between Kaitoke and the Summit Tunnel to get approximately balanced grades for the probable up- and down-country traffic. Though not quite so good, this route approaches very nearly the Tauherenikau route as regards grades.

If, as another alternative, a line were constructed like the preceding from the Road Summit Tunnel, down the hillsides on the left bank of Abbott's Creek, then along the hillsides between Featherston and the Tauherenikau River, crossing the river at a level of 70 ft. to 80 ft. above the level of Woodside Station, and then running along the terraces and flats to Woodside, the continuous grade obtainable, assuming that the grade in the Summit Tunnel is 1 in 90 on the straight, would be about 1 in 95. With the grades on the curves suitably and proportionately flattened, according to the sharpness of the curve, it is probable that a working gradient of 1 in 82, or perhaps better, could be obtained by careful location of the line, depending on the relative lengths of curved and straight line on the section between the Summit Tunnel and the Tauherenikau River crossing. The bridges over Tidswell's Creek, Beal's Creek, Cave's Creek would become viaducts of some size, and the viaduct required to cross Boar Bush Creek would be 250 ft. high, though the line could, I think, be run up the gully to avoid the viaduct; also there would be either a smaller viaduct or a high bank required for a gully about halfway between Featherston and the Tauherenikau. There would likely be some short tunnels required at some of the gullies; the bridges or viaducts might be considerably reduced by these tunnels, but I have not assumed that this would be so in the approximate estimate given below. The worst part of the country along which this alternative route runs is, I think, that around the sides of Cave's Creek. The hillsides are much more favourable, I think, for railway-construction than those along which it is proposed to construct some portions of the Midland Railway, and more so than some other places where railways have been already constructed in New Zealand. The best grades from Woodside to Kaitoke are obtainable by this route, and the worst parts of the line would be safer than the worst parts along the Tauherenikau route. The cost of construction from Pakuratahi to Woodside would be very heavy—say, £350,000. In this I have included a sum of £25,000 for short tunnels in addition to the cost of the Summit Tunnel, and £93,000 for bridges and viaducts. There would be some difficulty in getting grades from the Upper Hutt to the Summit sufficiently flat to avoid the use of assistant engines with the present ratio of up- to down-country traffic on a line with so flat a gradient as this one between Woodside and the Summit Tunnel. A possible variation of this route would be to run up Boar Bush Gully and tunnel through to Cave's Creek watershed; this would make the grade steeper, perhaps not much better than the grade via the Tauherenikau; but I have no reliable data for determining the grades or the amount of tunnelling required.

The line via the Tauherenikau would branch off from the Abbott's Creek route at a point about two miles and three-quarters beyond Kaitoke. After crossing the Rimutaka Creek by a small bridge this line runs for a little over two miles along the spurs and intervening flats, until the tunnel through the main range is reached. This length of line is fairly easy, and should only require moderate banks and cuttings, and a number of culverts. If put on the grade suggested by Mr. Dobson, the tunnel would be about 70 chains long. It will probably be through slate rock, and will require to be lined throughout. If, however, the tunnel grade is made to fall instead of rise to the south end, the saving in rise and fall, curvature, and length of line between the Pakuratahi and the tunnel will be likely to justify the lengthening of the tunnel sufficiently to give an easy up-grade from the south to the north end; this will also be of considerable advantage in constructing the tunnel. At the north end there is a large creek, which will be likely to give trouble similar to that experienced at the ends of the Spooner's Range Tunnel. The approach cutting at this end will be long, through a piece of comparatively flat ground; the upper end of this flat forms the virtual summit for this route. Beyond the tunnel the line will run down the right bank of a tributary of the Tauherenikau to its junction with the river. At the end of the first mile the grade is not very high above the creek, but for the last three-quarters of a mile or so the creek falls rapidly, and at its junction with the river the grade-line is about 180 ft. above the river-bed. Along this last section the creek is cutting into its banks, and there are a number of slips, one or two of some size: in one case what appears to be an old slip, overgrown with small scrub, reaches above the grade-line; in all the other cases the upper edges of the creek-banks where cut away and fallen in are well below the grade-line. Judging from the slopes of the hillsides, the works required along the tributary to form a railway-line would not be very heavy for the first mile, but would be somewhat heavy for the last three-quarters of a mile or so. Cuttings, banks, and culverts, with perhaps one or two small bridges, would be the works required.

After leaving the tributary creek the line would follow the right bank of the Tauherenikau for about four miles and a half. There will be some heavy work on this section, especially on the first three miles. The cuttings will be heavy; some short tunnels at bluffs and bridges over tributary creeks will be required. The works would be lighter on the last mile and a half as the gorge opens out more, and generally the slopes of the hillsides seem not to be so steep. About three miles from Woodside Station the line would cross the Tauherenikau River either on a bridge or on a viaduct, according to the grade adopted, and would then run on the terraces or on the hillsides, as the grade may require.

The continuous grade obtainable from Woodside to the tunnel will vary from 1 in 60 to about 1 in 81, according as the grade begins near the crossing of the river or near Woodside Station. When the grades are suitably flattened on the curves in proportion to their radius, I think it is probable that a ruling grade not worse than 1 in 70 on the straight can be got from Woodside to the tunnel. The corresponding ruling grade for the proposed 1-in-60 line would be about 1 in 56. The volume of the present traffic fully justifies the adoption of the 1-in-70 grade, and if a new line is worth making the best obtainable grade should be adopted. The 1-in-70 grade would, of course, be a little more costly, owing to the line having to run for some distance on the hillsides after crossing the river instead of on the flats; the viaduct across the river should not cost much more, if anything more, than the tunnel, cuttings, and bridge that would be required for the line with the steeper grade. Against this extra cost it will be a distinct advantage to have the grade-line as high above the river as it can be got in the lower length of the tributary creek and the upper two miles or so of the gorge. The additional height gained by the 1-in-70 grade on these sections will be from 30 ft. to 70 ft., and will give a safer if not a cheaper line.

The hills are of slate along the tributary creek and the Tauherenikau, and where it is exposed to the atmosphere it does not seem to be of a very stable character. I only saw some small slips on the banks of the Tauherenikau, along which the proposed line would run. These at present are not of any great moment. The line will avoid the large slip just above Buck's house, which I take to be the one Mr. Rochfort refers to in his report. The occurrence of a slip as large as this on the line after it was made would necessitate a heavy expenditure in making a tunnel to avoid it. The cuttings in this slate rock will, I think, weather considerably, and all tunnels will have to be lined throughout. Until, however, the grade-line is defined along the hillside, and the character of the works approximately determined, it will not be possible to make any very definite statements as to the probable stability of the works that will be required to form a railway-line down the Tauherenikau for the first three miles, or as to their probable extent and cost.

Woodside, being the highest point on the existing line between the Waiohine and Tauherenikau Rivers, is the proper ending-point for the deviation. Better grades than the 1 in 70 on the straight could only be got by keeping the line on the hillsides and crossing the Waiohine at a higher level than at present. The Tauherenikau Valley does not afford facilities for doing this except at great cost.

The above-described deviations do not cut out the steep gradients and numerous curves of only 5 chains radius between the Upper Hutt and Kaitoke. This will best be accomplished, I think, by a combination of No. 1 and No. 3 trial lines, described below.

No. 1 trial line starts from the Upper Hutt Station, and runs for about a mile over the flats; then it rises for about six miles on a 1-in-60 gradient, broken by a short length of 1-in-550 grade. The Mungaroa Stream and Valley would be crossed by a long viaduct, from 50 ft. to 140 ft. high. The line is on steep sideling ground for a short distance south of the Mungaroa Stream, and also on steep sidling ground from Mungaroa to a point opposite Kaitoke, seven miles from the Upper Hutt, where it passes over a low saddle requiring a tunnel at least 20 chains long. From the saddle the line runs through easy country to join the Kaitoke–Featherston trial line near the Pakuratahi, the length from the Upper Hutt to the Pakuratahi crossing being about nine miles. The estimated cost of this line is, say, £111,000, in round figures, for the nine miles. No. 2 line is an alternative to the lower portion of No. 1 line, but it increases the length by a mile and a quarter, while it is estimated that the cost of construction would only be lessened by £5,000 to £6,000; this is too small a saving to justify the increased length, except the extra length where required for the purpose of getting a flatter ruling grade to meet possible traffic requirements.

No. 1 trial line is quite independent of the existing line; but No. 3 line was run to determine how much of the existing line between the Upper Hutt to Kaitoke could be made use of. This line begins to rise on the hillside immediately after leaving the Upper Hutt Station, and joins the existing line just south of the Mungaroa Railway-station. A short length of the line and the station would be utilized. The line leaves the existing railway about 15 chains beyond the Mungaroa Station, and joins it again about a quarter of a mile south of the Kaitoke Station. The length of new line required is eight miles and a quarter, the estimated cost of which is £105,000. No. 4 line is an alternative of part of No. 3 line; it uses a portion of No. 2 line; it lengthens No. 3 line by about one mile, at an estimated saving in cost of £5,000, which is too little to justify the additional length.

The levels taken and the examination made show that the Hutt Gorge below the junction of the Pakuratahi is very rough, and it is only possible to take a railway-line up the gorge at great cost. The extra length puts this route out of the question for any line going through the Road Saddle.

For the Tauherenikau route a good grade could be got from the Upper Hutt to the Summit Tunnel. There would be about two miles and a half of very rough heavy work required in the Hutt and Pakuratahi Gorge, and a high viaduct over the Pakuratahi River; the line would run at a considerable distance from the trial line run from the Pakuratahi to the Tauherenikau River, and pass through the range by a tunnel most likely at some distance from the tunnel-site as surveyed. The only advantage offered by this route is a uniform grade from the Upper Hutt to the Summit, but the cost to get a safe line up the Hutt Gorge would be so great that it would be better to get whatever improvements in grades that may be deemed necessary by lengthening the tunnel through the saddle opposite Kaitoke.

The working gradients stated in each case make sufficient allowance for lengths of level required for passing-places. In the case of the up-grade on the Tauherenikau route—Woodside to the tunnel—two passing-places are allowed for. These will very considerably increase the traffic-capacity of the line; they will hardly ever be likely to be required as stations, as the settlement in the valley must always be small or nil under existing conditions. The passing-places cause a considerable steepening of the ruling working grade, which will spoil the line if ever a double line is required to be made, as a double line would probably be made with continuous grades from Woodside to the Summit Tunnel. A continuous working grade of 1 in 73 from Woodside to the tunnel would be sufficient for a much greater traffic than the present; and it is a question to be settled whether it would not be the better course to omit these passing-places if the line is made by this route. The passing-places are shown at approximately equal distances apart between Woodside and Kaitoke, and making the Mungaroa Station equidistant between Upper Hutt and Kaitoke put in on perhaps a bad site. Two passing-places are shown on the Road Saddle–Woodside route; one would serve as a station for the Featherston traffic, the other would be merely a passing-station.

It would be necessary, in order to avoid, if possible, any necessity to use assistant engines, to get sufficiently flat grades from the Upper Hutt to the Summit Tunnel on the deviation line adopted. For the ratio of up- to down-country traffic given in the General Manager's memorandum (attached) the grades required for the Tauherenikau route would be 1 in 64 on the straight; for the Road Saddle–Woodside route, 1 in 74 on the straight; and for the route ending at Fernside Station, 1 in 60 on the straight. Purely passenger traffic would require equal grades both ways, so would heavy excursion traffic to the Wairarapa. There will be some difficulty experienced in getting the 1-in-64 grade from the Upper Hutt to the Kaitoke Tunnel, and still more in getting the 1-in-74 grade without unduly lengthening the line or lengthening the Kaitoke Tunnel.

I think the choice of routes for the deviation will be found to lie between (1) a line from the Upper Hutt through Kaitoke Saddle, following somewhat closely the first two miles of No. 3 line and the last seven miles of No. 1 line so as to get a uniform working grade, combined with the Tauherenikau route, with 1-in-70 grades on the straight; and (2) a line with suitable grades between the Upper Hutt and Kaitoke Saddle, combined with the Road Saddle–Woodside route, with 1-in-82 grades on the straight. The only objection to this latter route is its much greater probable cost.

It would be possible to adopt either of these alternatives, and for the present, if it is thought advisable, only construct a section of the permanent deviation from about the Pakuratahi River crossing to Woodside, and form a temporary connection to the existing line between Kaitoke and the Pakuratahi, leaving the Upper Hutt–Pakuratahi section of the deviation to be done at some future time. This would involve the loss of some £8,000 or £9,000 required to form the temporary connection.

The advantages to be expected to be got from the construction of the deviation with 1-in-70 grades or 1-in-82 grades on the straight against the down-country traffic with properly balanced grades against the up-country traffic, would be: A much quicker service between Wellington and Woodside; a saving of seven miles in length of journey, and of over 1,100 ft. of rise and fall to be surmounted by each train; a greatly diminished number of goods-trains required to haul a given amount of traffic; a considerable saving in rolling-stock maintenance by the cutting-out of the 5 miles 8 chains of curves of 5 chains radius, and 1 mile 46 chains of curves of 5½ to 7 chains radius, on the existing line between the Upper Hutt and Cross Creek Stations (the limits of curvature on the new line being, say, 10 chains radius Upper Hutt to the Summit, and 7½ or 8 chains Summit to Woodside); the saving of the expenditure required to keep up the Cross Creek Station; the saving of the useless haulage of Fell brake-vans, weighing 12 to 18 tons, for each train up or down the Fell Incline; the saving of expense of running assistant engines between the Upper Hutt and the Summit, and between Cross Creek and Pigeon Bush, and some saving in maintaining the permanent-way on the Fell Incline. The grade of 1 in 70 on the straight will enable fully loaded engines to be run through from Woodville to Wellington (this grade offering about the same resistance to traction as the 1 in 76, with curves of 15 chains radius, between Woodville and Woodside), or the grade of 1 in 82 on the straight would enable an engine to take up some additional loading between Eketahuna and Woodside, in addition to its full load from Woodville to Eketahuna, and take this additional load through to Wellington without assistance.

The probable saving in working-expenses on the present annual traffic should be at least £12,000 to £13,000, but against this there would be, in the case of the Tauherenikau route, the cost of working a branch line to Featherston or Pigeon Bush; with the Road Saddle–Woodside route, this, perhaps, might be avoided, though it must be admitted that the station on the hills about 370 ft. or so above Featherston would be somewhat inconvenient. There would also, for some time at least, be an increased cost in earthwork maintenance. With increasing traffic, such as may reasonably be expected, there would be correspondingly greater saving in working-expenses.

The deviation via the Tauherenikau will reduce the distance from Woodville to Wellington to about 107½ miles, as against 105 miles by the Manawatu line; but in view of the slower speeds through the Manawatu Gorge, and the slow rate of travelling from Tawa Flat to Wellington, the time from Woodville to Wellington via the Tauherenikau deviation would, I think, be a little shorter, as it also should be by the Woodside–Road Saddle route—in both cases for passenger-trains. The ruling gradient via the Manawatu line against traffic to Wellington is 1 in 56, with 42-chain curves, as against 1 in 70 on the straight by the Tauherenikau deviation.

I have endeavoured to condense into the attached table all the information available as to the costs as estimated and the salient features of the several routes. The costs given for hauling 100,000 tons of gross loads of goods-trains (*i.e.*, the weight of wagons and their loads only, exclusive of the weights of the engines) from Woodside to the Upper Hutt, over the several routes, are computed on the supposition that engines of about the power of the new B engines will be run on the deviation, also that the gross weight of the trains up the 1 in 15, exclusive of the weights of the Fell engines and Fell brake-vans, is 110 tons. The average weight of the trains up the incline is, for the last year, just under 100 tons, so the comparison should not be unfair to the existing line. It would, however, be possible to get Fell engines capable of taking up greater loads; but, on the other hand, it would also be possible to get more powerful engines than the B engines, and I have no doubt by the time the deviation is made that such engines will be in use.

The volume of the present traffic over the Rimutaka Incline is given in the attached memorandum from the General Manager of Railways.

The information regarding the Wainui-o-mata–Wairongomai route is hardly complete enough to enable any very definite comparisons being drawn between it and the other possible deviations between the Upper Hutt and Woodside. The estimated cost of this deviation is given by Mr. Dobson at £378,000, and is so high that the route will not at all compare with the Road Saddle – Featherston route, with equal grades 1 in 40, but for which the ascertained cost is only £181,200. In addition to this the distance would be ten miles longer. The great cost, the steep ruling grade, and the great extra length are, I think, quite sufficient to condemn this route.

A considerable time will be required to make the permanent survey of the whole deviation from the Upper Hutt to Woodside—say, eighteen months to two years for a party as ordinarily constituted; therefore, if anything is intended to be done in the near future, the survey should be put in hand soon. The first work to be done should, I think, be the running of a grade-line from the north end of the tunnel down the Tauherenikau to Woodside on the 1-in-70 grade. This, with a sufficient number of cross-sections at suitable points, would enable the general character and amount of the works required to be approximately ascertained. Then a similar survey should be made from the east end of the Road Saddle Tunnel to Woodside. The limits of curvature should be 10 chains radius, except for the worst parts of the Tauherenikau, when 7½-chain as well as 10-chain curves should be tried. In the final location of the adopted line all grades on curves should be reduced to make the probable traction on each curve no worse than on the steepest grade on the straight. I think also that provision should be made for putting transition curves at the ends of all curves. As there is no very reliable information available for curve-resistance on 3 ft. 6 in. gauge lines, I would recommend that some measurements of curve-resistance be made sufficiently numerous and accurate to enable the results to be used with confidence in all future railway locations.

P. S. Hay.

PROPOSED DEVIATION, WELLINGTON-NAPIER RAILWAY, OVER RIMUTAKA.

Summary of Leading Features of the Several Routes between Upper Hutt and Woodside Stations.

Route.	Ruling Gradients.		Ruling Grade to Wairarapa required for Existing Ratio of Traffic for Grade in (1).	Length: Upper Hutt to Woodside.	Rise and Fall: Upper Hutt to Woodside.	Estimated Cost.	Estimated Number of Trains required for Haulage of 100,000 Tons of Gross Engine-load from Woodside to Upper Hutt, and Cost of Haulage.				Lengths of Tunnels.		Height of Summit above Sea-level.
	Wairarapa to Wellington.	Wellington to Wairarapa.					B Engines.	Two Fell Engines.	Number of Train-miles.	Cost.	Summit Tunnel.	Other Tunnels.	
	(1)	(2)		Miles.	Ft.	£	Trains	Trains		£	Yd.	Yd.	Ft.
Upper Hutt to Featherston, via No. 1 line and Road Saddle	1 in 40 + 10-chain curves	1 in 55	1 in 34 on straight	22¾	1,585	285,000	538	..	12,235	1,835	3,146	440	897
	1 in 50 on straight		1 in 45 on straight			298,000	380	..	8,645	1,297	3,146	440	
Upper Hutt to Fernside, via No. 1 line and Road Saddle	1 in 66 on straight	1 in 55	1 in 60 on straight	23	1,419	370,000	287	..	6,601	990	3,120	440 + 500*	897
Upper Hutt to Woodside, via No. 1 line and Road Saddle	1 in 82 on straight	1 in 55	1 in 74 on straight	23¼	1,279	460,000	235	..	5,464	820	3,100	440 + 800*	897
Upper Hutt to Woodside, via No. 1 line and Tauherenikau	1 in 70 on straight	1 in 60 on str.	1 in 64 on straight	22½	1,347	325,000	272	..	6,120	918	1,540 to 1,650	440 + 800*	979 to 927
	1 in 56 on straight		1 in 53 on straight				338	..	7,605	1,041			
Existing line ..	1 in 15 + 5-chain curves	1 in 35 + 5-chain curves	..	29¾	2,485	..	..	910	..	5,200	..	..	1,144

* Assumed aggregate length of short tunnels.

MEMORANDUM for the GENERAL MANAGER, New Zealand Railways.

Public Works Office, Wellington, 9th June, 1899.

RIMUTAKA DEVIATION.

COULD you please give me information on the following points :—

Passenger-trains each way per day.
Goods-trains each way per day.
Total number of trains Cross Creek to Featherston in a year.
Total number of trains in a year, Featherston to Cross Creek, to be sent up incline.
Gross tonnage of same, exclusive of engine-weights.
Total number of trains down incline in a year.
Total number of trains up incline in a year.
Gross tonnage of same, exclusive of engine-weights, and exclusive of incline brake-van. Is this van always used, and what is its weight?
Total number of trains in a year Summit to Upper Hutt.
Total number of trains in a year Upper Hutt to Summit.
Gross tonnage of the same exclusive of engines.
Assistant-engine mileage, Upper Hutt to Summit.
Assistant-engine mileage, Pigeon Bush to Cross Creek.
Is there any marked increase in cost of rolling-stock maintenance on Wellington–Woodville Section due to sharp curvature Upper Hutt to Cross Creek?
1899 returns, wool, sheep, cattle, timber, firewood, general merchandise (Wellington–Wairarapa).

P. S. HAY,
Superintending Engineer.

New Zealand Government Railways, Head Office, Wellington, N.Z.,
22nd June, 1899.

MEMORANDUM for Mr. P. S. HAY, Superintending Engineer, Public Works Department, Wellington.

THE following information is forwarded in response to your memorandum of the 9th instant :—

Average number of passenger-trains each way per day, Cross Creek and Summit	2
Ditto goods-trains	6
Total number of trains from Cross Creek to Featherston in a year ...	1,792
Tonnage of ditto (approximate)	174,323
Number of trains in a year from Featherston to Cross Creek to be sent up incline	1,756
Tonnage of ditto	197,348
Number of trains down incline in a year	2,303
Tonnage of ditto	180,653
Number of trains up incline in a year	1,982
Tonnage of ditto	197,348
Number of trains from Summit to Upper Hutt in a year	1,939
Tonnage of ditto	197,348
Number of trains from Upper Hutt to Summit in a year	1,938
Tonnage of ditto	180,653
Assistant-engine mileage from Upper Hutt to Summit, including return	5,863
Assistant-engine mileage from Pigeon Bush to Cross Creek, including light running to Pigeon Bush	7,785

Traffic over Rimutaka for year ended 31st March, 1899 :—

——	Cattle.	Sheep, &c.	Wool.	Firewood.	Timber.	Grain.	Merchandise.	Minerals.
	No.	No.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.
North ...	222	1,873	3	48	130	4,978	11,367	2,640
South ...	1,792	421,197	5,947	5,298	25,852	691	4,516	405
Total ...	2,014	423,070	5,950	5,346	25,982	5,669	15,883	3,045

Tonnages are exclusive of weights of engines and Fell brake-vans. The weight of Fell brake-van is 6 tons; and one, two, or more, according to train-load, are put on all trains either ascending or descending the incline. With the exception of that for Cross Creek – Summit, the tonnages are approximate.

In addition to traffic given under heading of "Traffic over Rimutaka," a large quantity of coal for locomotives, timber, ironwork, cement, &c., for maintenance works, is conveyed over the incline. The tonnage of this departmental traffic is, however, included in that for trains given on first page of this memorandum.

An answer to your inquiry in regard to increase in cost of rolling-stock maintenance will be sent in a few days.

T. RONAYNE,
General Manager
(per T. W. W.).

New Zealand Government Railways, Head Office, Wellington, N.Z.,
15th July, 1899.

MEMORANDUM for Mr. P. S. HAY, Superintending Engineer, Public Works Department, Wellington.

RIMUTAKA DEVIATION.—With further reference to your memorandum of the 9th ultimo, the Locomotive Superintendent of this department states that wagon-tires and brasses will run about four times as long on a fairly straight road, in comparison with such a road as between Upper Hutt and Cross Creek.

T. RONAYNE,
General Manager,
(per T. W. W.).

(APPENDIX K.)

WELLINGTON-NAPIER RAILWAY: REPORT ON PROPOSED ROUTE FOR DEVIATION OF LINE IN ORDER TO AVOID THE FELL INCLINE OVER THE RIMUTAKA, BY MR. R. W. HOLMES, M.INST.C.E.

Public Works Office, Wellington, 11th September, 1899.

Hon. the Minister for Public Works.

MR. R. W. HOLMES, Resident Engineer, having made an examination of the country from Petone to Pigeon Bush, in the Wairarapa Valley, with a view of ascertaining if a practicable route for a railway is obtainable by way of the Wainuiomata, Orongorongo, and Wairongomai Valleys, his report and plans are submitted for your information.

It will be seen by the report and plans that the country between the Lower Hutt Valley and the Wairarapa Lake is of a very rough character, being intersected by high ridges, through which, in order to obtain a line with moderately easy grades, it will be necessary to construct two large tunnels, one through the Wainuiomata Ridge being one mile in length, and the other through the Orongorongo, between the head of the Wainuiomata and the Wairongomai Valley, will require to be 3 miles 50 chains long, the latter on a grade of 1 in 100. This latter tunnel, on account of its great length, will be costly to construct, and will take a long time to excavate, besides the difficulty of working such a length of tunnel with heavy trains on a grade of 1 in 100, unless very efficient means of ventilation are provided.

Mr. Holmes estimates the cost of constructing the 30 miles 60 chains of new railway at £463,547, but has probably underestimated the value of the work in the long tunnels, for which I consider £35,000 should be added. The construction of the railway along the Wainuiomata Valley is likely to interfere considerably with the source and head-works of the Wellington City water-supply, consequently some objection to the work may be expected from the Corporation.

WILLIAM H. HALES,
Engineer-in-Chief.

MEMORANDUM for the ENGINEER-IN-CHIEF, Public Works Department.

WELLINGTON-NAPIER RAILWAY: PROPOSED DEVIATION BETWEEN PETONE AND PIGEON BUSH VIA WAINUI-O-MATA—LOW-LEVEL LINE.

SIR,— Public Works Department, Wellington, 9th September, 1899.

I have the honour to inform you that I have examined the country between the Petone Station and Pigeon Bush Station, via the Wainuiomata and Wairongomai Valleys, with the object of seeing whether or not a practicable route exists for a deviation of present line of railway, and now report upon the same as follows:—

The obstacles to the construction of a line are three watershed-divides—namely, Hutt-Wainuiomata, Wainuiomata-Orongorongo, and Orongorongo-Wairongomai.

The saddles in these divides cannot be made use of because the mountain-sides are too precipitous, too broken by branch valleys, and too liable to slip to permit of the construction of a railway-line in the position that would be necessary to allow of grading over them; also, there is not sufficient distance to grade down in from the Orongorongo River to the Wainuiomata River with a 1-in-60 grade, while a Fell incline on a very unstable foundation would be required on the Wairongomai side. The summit-level of a graded line would be about 1,400 ft. above the sea, and situated at the head of the Wainuiomata River.

The difficulties presented by these divides can be surmounted by the construction of two tunnels, one 80 chains (one mile) long between Lowry Bay and Wainuiomata, the other 3 miles 50 chains long between Wainuiomata and Wairongomai Rivers, passing under the Orongorongo River at a depth of 800 ft. below the bed.

There will be two miles of heavy work grading up to the first tunnel from the Hutt Valley, and three miles of heavy work grading down the Wairongomai Valley from end of second tunnel; the rest of the formation-works will be very easy, and situated on flat ground.

With the exception of three miles in the Wairongomai Valley the formation-works will be very stable, neither liable to slip nor suffer damage by flood, consequently the maintenance of line will be very light.

The position of line is indicated on the accompanying plan.

The distance from Petone to Pigeon Bush is 30¾ miles, which is the length of deviation or new line to construct.

The distance from Wellington to end of deviation at Pigeon Bush via constructed line is 41 miles, and via deviation is 37 miles 33 chains, a saving of 3 miles 47 chains being effected on the actual distance, and 10¼ miles on the present paying distance.

The highest point or summit of the line is at the Wellington end of the long tunnel, its height above sea-level being 560 ft., and 584 ft. below summit of constructed line.

The maximum grade required is 1 in 70 against the traffic to the Wairarapa, and 1 in 80 against the traffic from the Wairarapa, which is the larger quantity: they are therefore situated in the most advantageous position. The accompanying section indicates the extent and rates of the grades.

The maximum curvature required is 7½ chains radius, which may possibly be reduced to 10 chains radius. The sharp curvature is confined to two parts of the line, situated between the 3rd and 6th mile pegs, and between the 16th and 20th mile pegs, which aggregate a length of seven miles; the rest of the line consists of long straights with flat curves: the line will therefore be an extremely favourable one for fast travelling, both as regards grades and curvature.

The estimated cost of deviation, complete with all equipment, is £463,547, made up as follows:—

From	To	Distance.	Item.	Rate.	Amount.
M. CH.	M. CH.	M. CH.		£	£
0 0	3 0	3 0	Mile	7,000	21,000
3 0	6 40	3 40	„	30,000	105,000
6 40	12 50	6 10	„	5,000	30,625
12 50	16 20	3 50	„	59,840	216,922
16 20	19 60	3 40	„	10,000	35,000
19 60	30 60	11 00	„	5,000	55,000
					£463,547

Average rate, £15,075 per mile.

The long tunnel must be on a grade of 1 in 100, descending towards the Wairarapa. Should the products of combustion emitted by the locomotives prove troublesome, ventilation may be effected by sinking a shaft from the Orongorongo Valley, and driving a current of air down it into the tunnel by means of a small stream of falling water derived from the river, and delivered near bottom of shaft at a high pressure by means of piping, a pressure derived from a head of 800 ft. being available; or the water may be led to the lower adit of tunnel from the point marked X on plan, and there, with an available head of 700 ft., be used to either drive air through tunnel by means of fans, or to generate electricity and work the up-traffic by means of electrical locomotives.

The country between the reservoir in the Wainuiomata Valley and the narrow belt of flat country along the Wairarapa Lake is quite unfit for settlement; it is only fit for a forest reserve, or to act as a catchment-basin for supplying Wellington with water and power as far as the Orongorongo Valley is concerned. The Wairongomai Valley is merely a precipitous mountain-gorge.

The chief points in favour of this route are: (1) Shorter by 3 miles 47 chains than constructed line; (2) low summit-level—viz., 560 ft. above sea-level; (3) only one bridge of any magnitude—viz., that over the Hutt River; (4) easily maintained; (5) very easy grades; (6) does not interfere with present line through Featherston.

R. W. Holmes, Resident Engineer.

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